

IN THE UNITED STATES DISTRICT COURT  
FOR THE EASTERN DISTRICT OF TEXAS  
MARSHALL DIVISION

UNITED STATES AUTOMOBILE ) (  
ASSOCIATION ) (  
CIVIL ACTION NO.  
VS. ) (  
2:18-CV-245-JRG  
MARSHALL, TEXAS  
OCTOBER 31, 2019  
WELLS FARGO BANK, N.A. ) ( 1:07 P.M.

TRANSCRIPT OF JURY TRIAL

AFTERNOON SESSION

BEFORE THE HONORABLE CHIEF JUDGE RODNEY GILSTRAP,  
UNITED STATES DISTRICT JUDGE

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23 (Proceedings recorded by mechanical stenography, transcript  
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25

## P R O C E E D I N G S

(Jury out.)

COURT SECURITY OFFICER: All rise.

THE COURT: Be seated, please.

Counsel, I understand you're still talking about the issues we discussed in chambers this morning. We'll -- I'll circle back and see where you are on those during the afternoon recess.

MR. SHEASBY: If it pleases the Court, Your Honor, yes.

THE COURT: All right. I'll do that.

All right. Are we ready to continue?

MR. MELSHEIMER: We are.

THE COURT: Let's bring in the jury.

(Jury in.)

COURT SECURITY OFFICER: All rise.

THE COURT: Welcome back, ladies and gentlemen. Please have a seat.

We'll continue with the Defendant's cross-examination of Professor Tom Conte.

Mr. Melsheimer, you may continue.

MR. MELSHEIMER: May it please the Court, Your Honor.

THOMAS CONTE, PH.D., PLAINTIFF'S WITNESS, PREVIOUSLY SWORN

CROSS-EXAMINATION CONTINUED

01:09:18 1 BY MR. MELSHEIMER:

01:09:18 2 Q. Good afternoon, Dr. Conte.

01:09:20 3 A. Good afternoon.

01:09:21 4 Q. Let's return, if we can, to the claim language, sir,  
01:09:27 5 and we're going to go to Claim 1 of the '571 patent.

01:09:29 6 Do you see it displayed in front of you, sir?

01:09:33 7 A. I do.

01:09:34 8 Q. And this is one of the independent claims that you  
01:09:37 9 analyzed for infringement purposes, true?

01:09:40 10 A. True.

01:09:41 11 Q. There are some dependent claims that include this  
01:09:48 12 claim, correct?

01:09:49 13 A. Correct.

01:09:50 14 Q. But we know that if there's an -- if there's -- if an  
01:09:57 15 element is not satisfied in the independent claim, then, by  
01:10:01 16 definition, there can't be infringement of the dependent  
01:10:06 17 claim. Do I have that right?

01:10:13 18 A. I'm a little fuzzy on that, but I believe that's true.

01:10:15 19 Q. So just to make sure we're on the same page, so my  
01:10:19 20 question, I'll try to make it more precise.

01:10:21 21 If a claim element is missing in an infringement  
01:10:26 22 analysis from the independent claim, then, by definition,  
01:10:32 23 the dependent claim cannot be infringed, right?

01:10:36 24 A. Generally, that's true, yes.

01:10:38 25 Q. This claim is described in the very first words as

01:10:44 1 being software, right?

01:10:47 2 A. Yes.

01:10:50 3 Q. That's what the phrase, a non-transitory computerable  
01:10:58 4 reader -- readable medium comprising computer-readable  
01:11:02 5 instructions, that's essentially -- that's software code,  
01:11:05 6 right?

01:11:05 7 A. Yes.

01:11:06 8 Q. That's one of the reasons why when you did your work in  
01:11:10 9 this case, the first thing you studied and what you spent  
01:11:20 10 the most time on was the source code, right?

01:11:21 11 A. What I spent the most time on, yes.

01:11:23 12 Q. Okay. I mean, you looked at the claims, of course,  
01:11:26 13 right, and you studied them?

01:11:29 14 A. Yes.

01:11:29 15 Q. Understood what the Court's definitions were, and then  
01:11:32 16 you -- you threw yourself into the code with the help of  
01:11:39 17 these two reviewers, who I think you told us before lunch  
01:11:43 18 may have spent over a hundred hours, along with your 40  
01:11:46 19 hours, looking at the source code to figure out how it  
01:11:49 20 operated, right?

01:11:50 21 A. So, generally, that's true.

01:11:56 22 Q. Now, you -- you understand that the -- the argument  
01:12:07 23 between the two sides here is the timing of capture, right?

01:12:09 24 A. Yes, generally, I believe that's the -- one of the  
01:12:16 25 issues.

01:12:16 1 Q. Well, if you look up in your report, sir, on  
01:12:21 2 Paragraph 420, you say -- tell me when you get there.  
01:12:27 3 A. You can start reading while I -- while I go.  
01:12:30 4 Q. It appears that Wells Fargo is arguing that in its  
01:12:34 5 system, capture occurs earlier in the process. Do you see  
01:12:40 6 that?  
01:12:42 7 A. That was my understanding.  
01:12:44 8 Q. And that's still your understanding, right?  
01:12:48 9 A. My understanding is that -- now that Wells Fargo is  
01:12:53 10 arguing, it just doesn't happen after.  
01:12:56 11 Q. And that's this -- this -- this "when" phrase, that's  
01:13:01 12 the timing condition in the patent based on the word  
01:13:05 13 "when," right?  
01:13:07 14 A. Correct.  
01:13:07 15 Q. And the Court has defined that to mean at or after,  
01:13:10 16 right?  
01:13:10 17 A. Yes.  
01:13:14 18 Q. So the other thing I wanted to mention to you about  
01:13:17 19 this claim, we've talked about this a little bit before  
01:13:19 20 lunch, is that the capture is happening with the camera,  
01:13:27 21 right?  
01:13:27 22 A. Yes.  
01:13:28 23 Q. There are slightly different terms used in the various  
01:13:34 24 patent claims, but, effectively, the capture in all these  
01:13:39 25 claims is happening with the camera using the camera. It's

01:13:43 1 that concept that the image is captured with the camera and  
01:13:48 2 not something else, right?

01:13:51 3 A. I need to check the claims, but I believe that's  
01:13:54 4 accurate.

01:13:55 5 Q. It's not -- and I'm not -- I'm not trying to be  
01:14:00 6 sarcastic -- it's not capturing with the bank's server,  
01:14:06 7 right?

01:14:06 8 A. That's correct.

01:14:08 9 Q. It may be that ultimately in the process, the checks  
01:14:16 10 end up being stored on the server, true?

01:14:18 11 A. That's correct.

01:14:20 12 Q. But the capturing that these claims require has to  
01:14:27 13 happen with the camera; do I have that right?

01:14:30 14 A. That's what the claim says.

01:14:33 15 Q. That's what we have to follow, as well, isn't it right,  
01:14:38 16 sir, what the claims say?

01:14:39 17 A. Yes.

01:14:40 18 Q. Now, you were here for the opening statement -- let  
01:14:54 19 me -- actually let me -- let me back up. I want to get  
01:14:59 20 back to this discussion we were having about memory,  
01:15:05 21 non-volatile memory versus volatile memory. Remember that  
01:15:07 22 discussion we had?

01:15:08 23 A. Yes.

01:15:09 24 Q. There are two -- generally, there's two kinds of  
01:15:14 25 memory, there's memory that's more permanent memory and

01:15:17 1 there's memory that's volatile memory. Is that a fair way  
01:15:20 2 of putting it?

01:15:21 3 A. Generally, yes.

01:15:22 4 Q. Sometimes called non-volatile or volatile, right?

01:15:27 5 A. Right.

01:15:28 6 Q. You and I had this conversation a little bit before  
01:15:30 7 lunch that, you know, volatile memory doesn't mean that,  
01:15:37 8 for example, if you have something on your phone and you  
01:15:39 9 shake it, that the data is just going to disappear. That's  
01:15:43 10 not what volatile means, right?

01:15:45 11 A. In general, that's true.

01:15:46 12 Q. Okay. And, in fact, you and I talked about that  
01:15:51 13 volatile memory, something can exist in volatile memory for  
01:15:55 14 an extended period of time or -- or it cannot, right?

01:16:01 15 A. In certain situations, yes.

01:16:02 16 Q. And I just wanted to make sure I was clear about this.  
01:16:06 17 It's not that volatile memory necessarily means that  
01:16:12 18 something is not going to be there for 10, 15, 20 minutes,  
01:16:18 19 an hour, it could be in volatile memory for hours, and  
01:16:21 20 still be volatile memory, right?

01:16:22 21 A. Hypothetically, yes.

01:16:24 22 Q. One of the things that separates volatile memory from  
01:16:30 23 non-volatile memory, as I understand it, sir, is that  
01:16:36 24 volatile memory, if the power source goes away, what's  
01:16:42 25 stored in non-volatile memory will disappear; is that true?



01:16:46 1 A. That's one scenario, yes.

01:16:47 2 Q. There are other scenarios, but that is one, correct?

01:16:52 3 A. Correct.

01:16:53 4 Q. If it's non-volatile memory, what that means is that  
01:16:58 5 the power goes away or goes down, and you plug it back in,  
01:17:04 6 you still got the data there in memory, right?

01:17:09 7 A. Again, that's one scenario.

01:17:11 8 Q. And, for example, the -- your book -- the book that you  
01:17:16 9 edited or oversaw the supplement for, that is something  
01:17:23 10 that's stored on a -- on permanent memory in a CD, right?

01:17:33 11 A. Correct, there's no power there.

01:17:35 12 Q. Correct. And so, in fact, whether -- I don't know if  
01:17:37 13 this is a CD-ROM or a DVD, but in any event, both of those  
01:17:42 14 are ways of storing things that are permanent, right?

01:17:52 15 A. Generally I would agree.

01:17:54 16 Q. And, of course, sir -- maybe you're hesitating for this  
01:17:58 17 reason. Of course you could, you know, heat this up or do  
01:18:02 18 something to it that might disrupt the storage, but  
01:18:06 19 generally speaking, something like a CD or a DVD is what we  
01:18:11 20 would call permanent memory, right?

01:18:13 21 A. That's one example.

01:18:14 22 Q. The claims of these patents, the claims of these  
01:18:20 23 patents do not contain the words volatile or non-volatile  
01:18:24 24 memory, correct?

01:18:24 25 A. The claims do not, no.

01:18:28 1 Q. The claims of these patents do not contain the word

01:18:35 2 JPEG, true?

01:18:35 3 A. The claims do not.

01:18:36 4 Q. You were here for the opening statement, correct?

01:18:58 5 A. For most of it, yes.

01:19:01 6 Q. And were you here for the Plaintiff's opening

01:19:06 7 statement?

01:19:06 8 A. Yes.

01:19:07 9 Q. So I'd like to put up a portion of that and ask you a

01:19:10 10 question about it.

01:19:14 11 MR. MELSHEIMER: Mr. Barnes, do we have that

01:19:17 12 excerpt?

01:19:18 13 THE TECHNICIAN: Yes.

01:19:29 14 Q. (By Mr. Melsheimer) So this was said by the counsel

01:19:30 15 for the Plaintiff, and it's describing, as I understand it,

01:19:36 16 what the Plaintiff's infringement theory is.

01:19:38 17 They obtain those images, they rapidly monitor

01:19:44 18 them to determine if they satisfy the criteria for machine

01:19:47 19 reading, and then they create a JPEG file when the frame

01:19:52 20 passes.

01:19:55 21 Did I read that correctly?

01:19:56 22 A. That's what the transcript says, yes.

01:19:59 23 Q. And then at the end there, it says: That's what USAA

01:20:02 24 says is infringing.

01:20:04 25 Right?

01:20:06 1 A. That's what it says, yes.

01:20:07 2 Q. That's what you say is infringing?

01:20:09 3 A. Yes. This isn't quite as precise as I put it.

01:20:17 4 Q. Well, now, you've said that a number of times in your  
01:20:20 5 testimony, sir, when -- sometimes in response to my  
01:20:23 6 questions about the words being -- not being precise,  
01:20:26 7 right?

01:20:26 8 A. Yes, I'm an engineer.

01:20:30 9 Q. Of course. And -- and, for example, that slide that  
01:20:33 10 said Patented Monitoring Criteria, you said, well, that  
01:20:36 11 really wasn't right because those criteria weren't  
01:20:39 12 patented, remember that, at the way beginning of your  
01:20:41 13 cross-examination?

01:20:41 14 A. Yes, although, I think -- again, that was confusing  
01:20:51 15 because of my understanding of patent law.

01:20:53 16 Q. And there -- there have been some other observations  
01:20:56 17 that you've made about precision and wording, including  
01:21:00 18 some of your own wording, right?

01:21:01 19 A. No, that's inaccurate.

01:21:05 20 Q. So you haven't criticized some of your own wording  
01:21:09 21 during your testimony in front of the jury; you haven't  
01:21:11 22 criticized some of that in your previous writings as  
01:21:15 23 imprecise?

01:21:18 24 A. No, I have not.

01:21:19 25 Q. Okay. Let me put it this way, sir: Can we at least

01:21:23 1 agree that precision in words is part of the reason why  
01:21:30 2 we're here, right?

01:21:31 3 A. Among many others, yes.

01:21:34 4 Q. And in a patent case, precision in words are -- is  
01:21:39 5 important, isn't it, sir?

01:21:40 6 A. Yes.

01:21:41 7 Q. We have to use -- in some instances, special  
01:21:45 8 definitions, right?

01:21:46 9 A. Yes.

01:21:48 10 Q. And in some instances, we have to rely on the ordinary  
01:21:52 11 meaning of people with skill in the field to tell us what  
01:21:56 12 those words mean, correct?

01:21:58 13 A. That's correct.

01:22:00 14 Q. Now, can we agree that -- can we agree, sir, that the  
01:22:20 15 word "obtain" -- the word "obtain" does not appear in any  
01:22:29 16 of the patent claims asserted in this case?

01:22:37 17 A. The word "obtain" does not, no, in the claims, no.

01:23:01 18 MR. MELSHEIMER: You can take that down,  
01:23:02 19 Mr. Barnes.

01:23:03 20 Q. (By Mr. Melsheimer) I want to talk a little bit about  
01:23:07 21 the improvement in smartphone cameras over time and the  
01:23:15 22 changes in the Mitek software. Are you with me?

01:23:17 23 A. Yes.

01:23:17 24 Q. Can we -- so just to orient ourselves, the first of the  
01:23:22 25 Plaintiff's patents was filed on -- in 2009, is that --

01:23:28 1 does that sound right?

01:23:29 2 A. Yes.

01:23:29 3 Q. And it was granted in 2015. Does that sound right to  
01:23:33 4 you?

01:23:34 5 A. I believe so, yeah.

01:23:36 6 Q. The first iPhone came out in 2007, right?

01:23:43 7 A. Yes.

01:23:44 8 Q. You know, though, that there were devices prior to the  
01:23:49 9 smartphone that had what we would call some smartphone-type  
01:23:54 10 capabilities, right?

01:23:55 11 A. Yes.

01:23:56 12 Q. Such as the BlackBerry, right?

01:23:59 13 A. Yes.

01:24:00 14 Q. And other devices that predate the 2007 introduction of  
01:24:06 15 the iPhone, correct?

01:24:08 16 MR. ROWLES: Your Honor, may we approach?

01:24:10 17 THE COURT: Approach the bench, counsel.

01:24:16 18 (Bench conference.)

01:24:18 19 MR. ROWLES: Your Honor, I feel we're getting  
01:24:23 20 right back into the validity territory that you asked  
01:24:25 21 counsel to move on from before lunch break.

01:24:27 22 MR. MELSHEIMER: Not at all, Judge.

01:24:28 23 THE COURT: Where are we going?

01:24:29 24 MR. MELSHEIMER: They made a specific point that  
01:24:31 25 one of our charge -- the timeline that we showed to the

01:24:35 1 jury was incorrect. When I said that the first mobile  
01:24:38 2 application was on a phone in 2007, Mr. Sheasby said to  
01:24:46 3 their -- their very first witness, he said, well, that  
01:24:49 4 can't be because the iPhone just came out in 2007.

01:24:51 5 And I'm just pointing out that that's not correct,  
01:24:54 6 that there, in fact, were smartphones before that, and then  
01:24:58 7 I'm done with this. But that was the direct point that he  
01:25:00 8 made, Judge. I think I'm entitled to rebut it.

01:25:05 9 MR. ROWLES: Right. I think the cross-examination  
01:25:08 10 of Mr. Bueche was the opportunity -- or recross, rather.

01:25:12 11 THE COURT: But that didn't happen with this  
01:25:15 12 witness, though, did it? That happened with Bueche.

01:25:15 13 MR. MELSHEIMER: I understand, Your Honor. But  
01:25:16 14 this witness -- I don't have to pick -- I can pick whatever  
01:25:17 15 witness I want to illustrate a point. I'm not impeaching  
01:25:21 16 him with this. I'm simply saying that what they tried to  
01:25:24 17 argue with Mr. Bueche is incorrect. That's all.

01:25:27 18 THE COURT: All right. Mr. Melsheimer, one more  
01:25:29 19 question, and then move on.

01:25:30 20 MR. MELSHEIMER: Thank you, Your Honor.

01:25:31 21 THE COURT: Okay. And do not go into validity.

01:25:33 22 MR. MELSHEIMER: Your Honor, I've -- I'm not going  
01:25:35 23 to.

01:25:36 24 THE COURT: I'm just reminding you.

01:25:38 25 MR. MELSHEIMER: Thank you. Thank you, Your

01:25:39 1 Honor.

01:25:39 2 (Bench conference concluded.)

01:25:46 3 THE COURT: All right. Counsel, ask your next  
01:25:48 4 question.

01:25:48 5 Q. (By Mr. Melsheimer) There were smartphones capable of  
01:25:50 6 running apps before the iPhone, true?

01:25:53 7 A. That's true.

01:25:57 8 THE COURT: Let's move on.

01:25:58 9 Q. (By Mr. Melsheimer) Now, can we agree that the Mitek  
01:26:03 10 software has changed over time?

01:26:08 11 A. Yes.

01:26:08 12 Q. And can we also agree that the smartphone technology,  
01:26:14 13 including the camera technology, has changed from 2007 when  
01:26:21 14 the iPhone was introduced and today?

01:26:24 15 A. Yes.

01:26:25 16 Q. The cameras have gotten a lot better, right?

01:26:30 17 A. Among other things, yes.

01:26:31 18 Q. The first iPhone didn't even have video, right?

01:26:34 19 A. That's correct.

01:26:35 20 Q. But now the cameras have very sophisticated video  
01:26:41 21 capabilities that allow extremely high resolution images;  
01:26:41 22 isn't that right?

01:26:49 23 A. Yes, that's correct.

01:26:49 24 Q. Are you aware whether or not Mitek's source code  
01:27:16 25 changed over time to account for the greater capability of

01:27:26 1 the smartphone cameras?

01:27:32 2 A. There is a portion of the code that changed. It wasn't  
01:27:35 3 relevant.

01:27:37 4 Q. Okay. So I want to make sure I understand your answer.

01:27:43 5 Was there -- are you aware whether the Mitek  
01:27:49 6 source code changed over time, in part to account for the  
01:27:57 7 expanded capabilities of the iPhone or smartphone cameras?

01:28:03 8 A. Again, there was change. It was not change that was  
01:28:07 9 relevant to my analysis.

01:28:09 10 Q. Okay.

01:28:09 11 MR. MELSHEIMER: Your Honor, I'm going to object  
01:28:11 12 as non-responsive because I don't think he's answering -- I  
01:28:15 13 didn't ask him if it was relevant. I was simply asking him  
01:28:18 14 if it was changed to reflect the improved capabilities of  
01:28:22 15 the camera. I just would like to get an answer to that, if  
01:28:24 16 possible.

01:28:25 17 THE COURT: Well, you've gotten an answer, but he  
01:28:27 18 did go beyond the answer that your question called for.  
01:28:31 19 I'll sustain the objection that -- after the witness says  
01:28:34 20 "there was change," the part about it wasn't relevant,  
01:28:38 21 that's non-responsive.

01:28:39 22 Let's proceed.

01:28:46 23 MR. MELSHEIMER: Your Honor, may I have just one  
01:28:48 24 moment to consult with my co-counsel?

01:28:51 25 THE COURT: You certainly may.



01:29:02 1 (Pause in proceedings.)

01:29:02 2 MR. MELSHEIMER: May it please the Court.

01:29:04 3 Thank you, Dr. Conte.

01:29:05 4 THE COURT: You pass the witness, Mr. Melsheimer?

01:29:07 5 MR. MELSHEIMER: Pass the witness, Your Honor.

01:29:09 6 THE COURT: Is there redirect, Mr. Rowles?

01:29:12 7 MR. ROWLES: Yes, Your Honor.

01:29:13 8 THE COURT: Proceed with your redirect

01:29:18 9 examination, please, Mr. Rowles.

01:29:33 10 MR. ROWLES: Thank you, Your Honor.

01:29:33 11 REDIRECT EXAMINATION

01:29:34 12 BY MR. ROWLES:

01:29:34 13 Q. Hello again, Dr. Conte.

01:29:38 14 A. Hello.

01:29:40 15 MR. ROWLES: Mr. Huynh, if I could get

01:29:42 16 Paragraph 83 of Professor Conte's report, please.

01:29:51 17 Q. (By Mr. Rowles) While this is coming up,

01:29:58 18 Professor Conte, do you recall being asked some questions

01:30:00 19 about a large table in Paragraph 83 of your report? Do you

01:30:04 20 remember that?

01:30:04 21 A. I do.

01:30:07 22 Q. And --

01:30:11 23 MR. ROWLES: And, Mr. Huynh, do we need a moment?

01:30:14 24 We might just need a moment, Your Honor.

01:30:22 25 Next, please -- next page, please, Mr. Huynh.

01:30:26 1 Q. (By Mr. Rowles) So, Professor Conte, you remember  
01:30:28 2 answering some questions about this table in your expert  
01:30:31 3 report, right?

01:30:33 4 A. I do.

01:30:33 5 Q. Now, I want to direct your attention to the very top of  
01:30:37 6 the table with the column headings. And can you tell me  
01:30:40 7 what the column headings say?

01:30:41 8 A. On the left it says: Component. And on the right, it  
01:30:46 9 says: Jobs Performed.

01:30:47 10 Q. And now if we look at the row labeled Mitek MiSnap on  
01:30:53 11 mobile device, do you see that, second from the bottom?

01:30:55 12 A. Yes.

01:30:55 13 Q. And so what is -- what are the jobs performed being  
01:30:59 14 described in this row of the table?

01:31:00 15 A. So this is defining -- this is listing the different  
01:31:06 16 jobs that that module performs, including IQA threshold  
01:31:13 17 checking, JPEG processing, image capture, corner tracking.

01:31:20 18 Q. And are these bullet points sequential steps?

01:31:27 19 A. Not at all.

01:31:30 20 Q. Now, the fourth bullet there says: Corners tracking.  
01:31:30 21 Do you see that?

01:31:30 22 A. Yes.

01:31:30 23 Q. Does the Wells Fargo application do corner tracking or  
01:31:34 24 corner detection at some point in the capture process?

01:31:36 25 A. It does. That's part of the analysis phase.

01:31:38 1 Q. And what phase of the process does that have?

01:31:41 2 A. That was that -- it happens after you -- I'm sorry. It  
01:31:49 3 happens -- after the preview image is received, that's when  
01:31:51 4 you do that analyze frame on samplebuffer.

01:32:00 5 Q. So it happens before the image is captured, fair?

01:32:03 6 A. That's correct.

01:32:10 7 MR. MELSHEIMER: Objection, leading, Your Honor.

01:32:10 8 THE COURT: Sustained.

01:32:10 9 MR. MELSHEIMER: Move that the answer be stricken.

01:32:11 10 THE COURT: Restate the question, counsel.

01:32:13 11 Q. (By Mr. Rowles) Professor Conte, when does corners  
01:32:15 12 tracking happen in the Wells Fargo app relative to the  
01:32:18 13 capture of images?

01:32:19 14 A. So it happens before the capture of images. It's part  
01:32:23 15 of the -- evaluating the monitoring criteria. That's what  
01:32:27 16 we saw. And then that result, that's where that, if result  
01:32:32 17 was yes, and then capture -- capture happens after that  
01:32:36 18 where you put the -- the Post-it on the door and you record  
01:32:40 19 the time and you pop up the rectangle saying success and  
01:32:43 20 then you encode the JPEG.

01:32:48 21 Q. And where is that bullet listed in this table?

01:32:50 22 A. So you'll see image capture is the first bullet. And  
01:33:02 23 JPEG processing is the third bullet. And IQA threshold  
01:33:10 24 detection, monitoring criteria, that is the second bullet.  
01:33:13 25 So these are not in order. If I wanted them in order, I

01:33:16 1 would have numbered them and not used bullets.

01:33:18 2 Q. Now, counsel asked you some questions about the JPEG  
01:33:21 3 processing, right?

01:33:22 4 A. Yes.

01:33:23 5 Q. Let me ask this: What -- you discussed in your direct  
01:33:29 6 examination capture of a JPEG, correct?

01:33:32 7 A. Yes.

01:33:32 8 Q. Now, does anything happen to the JPEG check image after  
01:33:38 9 it's captured in terms of processing?

01:33:40 10 A. Yes. You add extra metadata.

01:33:46 11 Q. And did you discuss that metadata in your expert report  
01:33:50 12 somewhere else?

01:33:50 13 A. I did.

01:33:52 14 Q. Could you turn in your notebook to Paragraph 253 of  
01:33:56 15 your expert report?

01:34:03 16 A. Here it is.

01:34:05 17 Q. And -- and what -- what do you see at Paragraph 253?

01:34:09 18 A. This is -- so I looked through each and every one of  
01:34:14 19 the versions. Here there's a key on the next page.

01:34:17 20 P means present in the version. NP means not present.

01:34:23 21 U means version was unavailable to me. C means commented  
01:34:28 22 out. UC means uncommented in version. "A" means added  
01:34:33 23 in -- in version. And R means removed.

01:34:35 24 And what these are -- are that extra what we call  
01:34:39 25 metadata added to the JPEG image. This includes things

01:34:44 1 such as the capture time so that the Wells Fargo server can  
01:34:48 2 see the time.

01:34:49 3 Q. And does that metadata get added into the JPEG edit at  
01:34:54 4 some point?

01:34:55 5 A. It get -- it gets added into the JPEG right after  
01:34:58 6 it's -- it's transcoded.

01:35:05 7 MR. ROWLES: And, Mr. Huynh, if I could get  
01:35:08 8 Slide 15, please?

01:35:25 9 Q. (By Mr. Rowles) Now, early -- earlier in your  
01:35:27 10 cross-examination, you were asked a number of questions  
01:35:29 11 about what the patent covers and does not cover. Do you  
01:35:32 12 recall that?

01:35:32 13 A. Yes.

01:35:33 14 Q. So could you summarize for the jury what the asserted  
01:35:38 15 patents are about?

01:35:38 16 A. So, again, these patents are about a processor  
01:35:43 17 assessing -- assessing the image quality. That's that  
01:35:49 18 monitoring criterion. It's about supplying corrected  
01:35:53 19 feedback, move closer, hold steady. And it's about once  
01:35:58 20 you pass that monitoring criteria, then automatically  
01:36:03 21 capturing an image when the criteria is satisfied.

01:36:05 22 Q. And is that covered by the claims of the patents?

01:36:08 23 A. Yes, each and every one of those is covered by the  
01:36:11 24 claims of the patent.

01:36:17 25 MR. ROWLES: Could you advance the slide,

01:36:19 1 Mr. Huynh? One more, please.

01:36:21 2 Q. (By Mr. Rowles) Now, you discussed this portion of the  
01:36:25 3 specification in the direction examination, correct?

01:36:29 4 A. That's correct.

01:36:30 5 Q. And you were asked some questions by Wells Fargo's  
01:36:35 6 counsel, Mr. Melsheimer, about the word "obtain." Do you  
01:36:38 7 remember that?

01:36:39 8 A. Yes.

01:36:39 9 Q. And did you find the word "obtain" anywhere in the  
01:36:43 10 patent specification?

01:36:45 11 A. It is in the patent specification multiple times. This  
01:36:47 12 is one instance.

01:36:48 13 Q. And so what -- excuse me, I didn't mean to cut you off,  
01:36:50 14 Professor Conte.

01:36:51 15 A. It's there in the next line, "obtained."

01:36:57 16 Q. And so what -- what is obtaining a frame? What part of  
01:37:02 17 the invention is that describing?

01:37:03 18 A. That's describing monitoring the image in the field of  
01:37:14 19 view of the camera.

01:37:15 20 Q. And does monitoring an image in the field of view of  
01:37:21 21 the camera, does that appear in the claims of the patent?

01:37:23 22 A. It does.

01:37:25 23 MR. ROWLES: Can I get Slide 117, please,

01:37:28 24 Mr. Huynh?

01:37:29 25 Q. (By Mr. Rowles) Professor Conte, you were asked some

01:37:37 1 questions about this slide, as well. Do you remember that?

01:37:38 2 A. Yes.

01:37:38 3 Q. And could you tell the jury what is the header in

01:37:42 4 the -- in the top of the far left column of this table?

01:37:47 5 A. Monitoring criteria listed in the 5 -- in '571 patent.

01:37:52 6 Q. And what does that mean?

01:37:53 7 A. That means it's listed in the specification.

01:37:55 8 Q. And are these examples of monitoring criteria described

01:38:01 9 in the claim or recited in the claim?

01:38:03 10 A. The claim recites monitoring criteria. The

01:38:07 11 specification gives this list.

01:38:08 12 Q. And what are these monitoring criteria used for in the

01:38:12 13 Wells Fargo application?

01:38:14 14 A. They're used to determine whether or not the check is

01:38:19 15 suitable for presenting to a depository.

01:38:23 16 Q. Now, you were asked some questions about a bitmap in

01:38:27 17 comparison to a JPEG, at various points; do you remember

01:38:33 18 that?

01:38:33 19 A. Yes.

01:38:33 20 Q. And I think the example that was given was holding or

01:38:37 21 hovering a camera -- or the phone, excuse me, over a check

01:38:40 22 and a bitmap being read from an image sensor. Do you

01:38:43 23 recall that discussion?

01:38:44 24 A. Yes.

01:38:44 25 Q. Now, in that example where you have a bitmap read from

01:38:51 1 the image sensor over a check, does the system know whether  
01:38:54 2 the monitoring criteria are satisfied or not?

01:38:56 3 A. No, not at that point.

01:38:59 4 Q. And why is that?

01:38:59 5 A. Because for each of those, once you obtain an image  
01:39:06 6 that's being displayed, you have to then check the  
01:39:10 7 monitoring criteria, that analyzeFrame:sampleBuffer.

01:39:16 8 Q. And what about the JPEG image, does the system know  
01:39:19 9 whether or not the JPEG image satisfies the monitoring  
01:39:23 10 criteria?

01:39:23 11 A. Yes, it does. You don't create the JPEG image until  
01:39:26 12 after you satisfy the monitoring criteria.

01:39:35 13 MR. ROWLES: Mr. Huynh, if I could please get  
01:39:46 14 Paragraph 412 from the expert report.

01:39:49 15 Q. (By Mr. Rowles) Now, you were asked a fair number of  
01:39:51 16 questions about Paragraph 412 of your report, right,  
01:39:55 17 Professor Conte?

01:39:55 18 A. Yes.

01:39:55 19 Q. And I want to direct your attention to the second full  
01:39:58 20 sentence which begins: A JPEG check image is created and  
01:40:01 21 transmitted. Do you see that?

01:40:03 22 A. Yes.

01:40:03 23 Q. Now, this is Paragraph 412 of the report, right?

01:40:07 24 A. Yes.

01:40:09 25 Q. Fair to say there are some other paragraphs in your



01:40:11 1 expert report, right?

01:40:12 2 A. More than a couple.

01:40:13 3 Q. Now, could you read -- could you turn in your book to  
01:40:16 4 Paragraphs 251 and 252 for me? And just let me know when  
01:40:20 5 you're there.

01:40:33 6 A. Yes, I'm there.

01:40:34 7 Q. Now, is the concept of creating a JPEG check image and  
01:40:39 8 transmitting a check image discussed elsewhere in your  
01:40:42 9 report other than Paragraph 412?

01:40:44 10 A. Yes, for example, in Paragraph 251.

01:40:48 11 Q. And could you read that heading above Paragraph 251?

01:40:54 12 A. Check image capture and preparation for transmission to  
01:40:58 13 bank servers.

01:40:59 14 Q. And so what is -- what is -- what did you describe in  
01:41:02 15 Paragraph 251 of your expert report?

01:41:06 16 A. So I describe that once the processor determines that  
01:41:10 17 it's time to capture the check image to be used for  
01:41:14 18 deposit -- I'm not going to lead you through all those  
01:41:17 19 other sections -- the camera functionality controlled by  
01:41:20 20 the processor then captures the check image. Specifically,  
01:41:24 21 the camera functionality creates a new color JPEG file,  
01:41:29 22 transcoding the raw frame data obtained from the camera  
01:41:32 23 sensor.

01:41:32 24 Q. And what do you discuss in Paragraph -- in the next  
01:41:36 25 paragraph, Paragraph 252?

01:41:38 1 A. I then discuss that that JPEG becomes the check image  
01:41:45 2 that is transmitted to the bank's server when the check  
01:41:48 3 deposit is submitted, as I discussed in more detail  
01:41:52 4 elsewhere in the report.

01:41:53 5 Q. Do you see anything in Paragraph 251 that talks about  
01:41:57 6 transmitting a JPEG or other check image to a bank server?

01:42:01 7 A. No.

01:42:05 8 Q. Professor Conte, were you in court yesterday afternoon  
01:42:09 9 when Mr. Bueche testified and when some deposition videos  
01:42:14 10 were played?

01:42:15 11 A. Yes.

01:42:16 12 Q. Let me ask this: You're familiar with Mr. Saffici,  
01:42:21 13 Wells Fargo's expert?

01:42:22 14 A. Yes, I read his transcript -- deposition transcript.

01:42:26 15 Q. So you've read the deposition transcript of Mr. Saffici  
01:42:31 16 before yesterday?

01:42:31 17 A. Yes.

01:42:35 18 Q. And were you in court when the actual video of that  
01:42:39 19 deposition was played?

01:42:39 20 A. Yes, I was in court when it was played.

01:42:42 21 MR. ROWLES: And, Mr. Huynh, if we could get  
01:42:46 22 Page 147 of yesterday afternoon's trial transcript.

01:42:53 23 Q. (By Mr. Rowles) Mr. Melsheimer asked you some  
01:42:54 24 questions about the plain and ordinary meaning of the word  
01:42:58 25 capture. Do you remember that?

01:42:59 1 A. Yes.

01:42:59 2 Q. And is the plain and ordinary meaning of the word  
01:43:01 3 capture something that you applied when you did your  
01:43:03 4 infringement analysis?

01:43:03 5 A. Yes, I did.

01:43:08 6 MR. ROWLES: And if we could highlight starting at  
01:43:11 7 Line 9 down to Line 17, please?

01:43:13 8 Q. (By Mr. Rowles) And could you read that testimony from  
01:43:21 9 Mr. Saffici's video testimony, please?

01:43:23 10 A. Question: You believe that it's covered by the claims  
01:43:27 11 of the patent, correct, analyzing preview frames, making  
01:43:31 12 decisions as to when the preview frames satisfy the  
01:43:35 13 criteria, and then taking that frame that satisfies the  
01:43:38 14 criteria. Correct?

01:43:39 15 Answer: Yes. The alignment, the monitoring, and  
01:43:43 16 the auto capture.

01:43:44 17 Question: The answer to my question is yes,  
01:43:48 18 correct?

01:43:48 19 Answer: I believe that's -- that'd be correct.

01:43:52 20 Q. Now, is the first part of that -- first question, is  
01:43:56 21 that similar in any way to what the Wells Fargo system  
01:44:00 22 does?

01:44:00 23 A. Yes, in my detailed analysis, it's identical to what  
01:44:03 24 the Wells Fargo system does.

01:44:04 25 Q. Now, in terms of the meaning of capture in these

01:44:10 1 claims, does Wells Fargo's expert, Mr. Saffici, agree with  
01:44:13 2 you or with Mr. Melsheimer?

01:44:17 3 MR. MELSHEIMER: Objection, Your Honor.  
01:44:21 4 Misleading -- I mean, objection, misstates the testimony.

01:44:25 5 THE COURT: Overruled.

01:44:28 6 A. He agrees with me. He agrees that it's taking the  
01:44:32 7 frame that satisfies the criteria.

01:44:36 8 MR. ROWLES: Mr. Huynh, if you -- do you have the  
01:44:38 9 excerpt of code from Lines 2278 to 20 -- I believe 2281  
01:44:43 10 that was discussed?

01:44:45 11 Q. (By Mr. Rowles) While he gets that up, Professor  
01:44:53 12 Conte, I want to ask you a little about source code. You  
01:44:55 13 discussed -- or Mr. Melsheimer asked you some questions  
01:44:58 14 about your counterpart, so to speak, Dr. Villasenor. Do  
01:45:02 15 you remember that?

01:45:02 16 A. Yes.

01:45:02 17 Q. And -- and you -- I believe you said you reviewed  
01:45:06 18 Mr. Villasenor's expert -- excuse me, Dr. Villasenor's  
01:45:09 19 expert report in this matter, right?

01:45:11 20 A. Yes, sir, I did. I read it entirely.

01:45:13 21 Q. Do you know whether or not Dr. Villasenor reviewed any  
01:45:19 22 source code on the computers in Dallas, Texas?

01:45:23 23 A. He did not.

01:45:25 24 Q. And now -- now we have this line of code up.

01:45:31 25 Do you recall discussing these lines of code

01:45:34 1 starting at Line 2278?

01:45:35 2 A. Yes.

01:45:37 3 Q. And Mr. Melsheimer asked you some questions about

01:45:40 4 comments in code. Do you recall that?

01:45:43 5 A. Yes.

01:45:43 6 Q. And a comment -- is a comment in code executed?

01:45:51 7 A. No, a comment is not.

01:45:52 8 Q. What about the code that we see here at Lines 2278

01:45:58 9 through 2280, is that code executed in the Wells Fargo

01:46:04 10 application?

01:46:04 11 A. The code that contains this is executed in the Wells

01:46:11 12 Fargo application, but this is the title of that code.

01:46:15 13 It's not a comment, but it's like a comment.

01:46:19 14 Q. So are Lines 2278 through 2280, specifically, are those

01:46:25 15 executed in the Wells Fargo application?

01:46:26 16 A. They are -- the code below them is executed, but these

01:46:33 17 are not specifically executed, no.

01:46:35 18 Q. You discussed some iPhone or iOS documentation. Do you

01:46:42 19 recall that?

01:46:43 20 A. Yes, I do.

01:46:43 21 Q. And I think there was some discussion of a delegate or

01:46:46 22 delegation. Do you recall that, generally?

01:46:48 23 A. Yes.

01:46:48 24 Q. In a -- in a standard iPhone camera application like

01:46:54 25 the one that comes preloaded on the phone, how are -- how

01:46:59 1 does the image capture process work?

01:47:01 2 A. It works where the delegate will take the -- the image  
01:47:11 3 and encode it into a JPEG file.

01:47:14 4 Q. And how does that work in the Wells Fargo system?

01:47:17 5 A. In the Wells Fargo system, the delegate first takes the  
01:47:22 6 preview image, it analyzes it with

01:47:28 7 analyzeFrame:sampleBuffer. If it passes that criteria,  
01:47:31 8 then and only then does it encode it into a JPEG file.

01:47:42 9 MR. ROWLES: Mr. Huynh, if we could have Slide 72,  
01:47:58 10 please.

01:47:58 11 Q. (By Mr. Rowles) Professor Conte, you were asked a few  
01:48:00 12 questions, I believe it was near the end of the

01:48:02 13 cross-examination, about changes in Mitek code over time.  
01:48:08 14 Do you recall that?

01:48:08 15 A. Yes.

01:48:09 16 Q. Is any of the functionality that you discussed in your  
01:48:13 17 direct examination, shown here on Slide 72, did that change  
01:48:17 18 in any relevant part, over time?

01:48:20 19 A. It did not.

01:48:24 20 Q. And I think you made some reference to other code or  
01:48:28 21 changes. Do you generally remember that?

01:48:31 22 A. Yes.

01:48:31 23 Q. And did that code have any relevance to your  
01:48:35 24 infringement analysis?

01:48:36 25 A. No.

01:48:37 1 Q. And -- and why not?

01:48:39 2 A. Well, because it was talking about other forms of  
01:48:45 3 capture implemented by the Mitek software.

01:48:47 4 Q. Now, Mr. Melsheimer asked you about the lines of code  
01:48:52 5 starting at 2278, which we just saw an extra -- excerpt of,  
01:48:58 6 right?

01:48:58 7 A. Yes, yes.

01:48:59 8 Q. Did Mr. Melsheimer ask you about any of the lines of  
01:49:03 9 the code below that, 2323, 2326, and so on down to 2481?

01:49:09 10 A. He did not.

01:49:15 11 MR. ROWLES: Now, if we can get Slide 86, please.

01:49:22 12 Q. (By Mr. Rowles) I believe there was some discussion  
01:49:24 13 about whether code trumps other pieces of information.  
01:49:30 14 Generally remember that?

01:49:32 15 A. Yes.

01:49:32 16 Q. Now, I want to direct your attention to Step 3 in your  
01:49:36 17 process diagram here. Let me ask this: The source code  
01:49:44 18 that you described for capturing check images, where is  
01:49:49 19 that source code executed in the process of the Wells Fargo  
01:49:52 20 system?

01:49:54 21 A. That's after you pass the analyze preview frame using  
01:50:02 22 monitoring criteria, Step 2, that's in Step 3.

01:50:05 23 MR. ROWLES: And if we could return to Slide 72,  
01:50:09 24 please.

01:50:09 25 Q. (By Mr. Rowles) So having that process diagram in

01:50:15 1 mind, when does the code above the green box here, labeled  
01:50:21 2 after monitoring criteria passed, when does that source  
01:50:26 3 code execute in the Wells Fargo system?

01:50:27 4 A. That code executes when a new preview frame comes in.

01:50:31 5 Q. And the lines of code that are listed under the green  
01:50:34 6 box, under after monitoring criteria passed, when do those  
01:50:42 7 lines of code execute in the Wells Fargo system?

01:50:43 8 A. Those lines execute if and only if the monitoring  
01:50:47 9 criteria pass.

01:50:50 10 MR. ROWLES: Nothing further. Pass the witness,  
01:50:52 11 Your Honor.

01:50:52 12 THE COURT: Is there further cross-examination?

01:50:54 13 MR. MELSHEIMER: Briefly, Your Honor. May it  
01:50:56 14 please the Court.

01:50:56 15 THE COURT: You may proceed with your additional  
01:50:58 16 cross-examination.

01:50:58 17 RECROSS-EXAMINATION

01:50:59 18 BY MR. MELSHEIMER:

01:50:59 19 Q. Dr. Conte, you know who Mr. Saffici is, right?

01:51:04 20 A. I -- I read the description of his job, yeah.

01:51:07 21 Q. You know that he was not forming any infringement  
01:51:10 22 analysis in this case, right?

01:51:12 23 A. My understanding, I actually don't know his role in the  
01:51:17 24 case. I'm sorry.

01:51:18 25 Q. Okay. No one told you --



01:51:19 1 MR. ROWLES: Your Honor, I think we need to  
01:51:21 2 approach the bench.

01:51:21 3 THE COURT: All right. Approach the bench.

01:51:23 4 (Bench conference.)

01:51:35 5 THE COURT: Yes.

01:51:36 6 MR. ROWLES: First, Your Honor, he was their claim  
01:51:38 7 construction expert, so his testimony is relevant to that.  
01:51:41 8 But I worry that this is getting into the reason why he's  
01:51:45 9 not here, which is that he was also a validity expert.

01:51:48 10 MR. MELSHEIMER: Your Honor, they have injected  
01:51:50 11 this guy into the infringement case. It's totally  
01:51:55 12 improper. We objected to it. They continue to do it.

01:51:58 13 They're now asking their infringement expert if he  
01:52:02 14 agrees or disagrees with Mr. Saffici. In fact, they said  
01:52:06 15 does, Mr. Saffici agree with you? So they're actually  
01:52:09 16 getting him to read the mind of Mr. Saffici. It's totally  
01:52:12 17 improper.

01:52:13 18 We have to be able to establish, in fairness, that  
01:52:15 19 this guy did not do an infringement analysis. He did not  
01:52:18 20 review the source code. That's what Dr. Villasenor did.  
01:52:22 21 And I'm not going to bring up what he did do, and I assume  
01:52:25 22 this witness has been instructed not to bring it up.

01:52:28 23 But it would be really unfair if we didn't get to  
01:52:30 24 point this out, given the shenanigans that are going on  
01:52:34 25 with Mr. Saffici.

01:52:37 1 MR. ROWLES: Your Honor, the only question --

01:52:37 2 THE COURT: I haven't heard the word "shenanigans"  
01:52:39 3 before, and you said that the Plaintiff has been unfairly  
01:52:43 4 injecting this into the case. I haven't heard you object  
01:52:45 5 to anything they've injected into the case so far.

01:52:47 6 MR. MELSHEIMER: Your Honor, we've objected  
01:52:49 7 several -- we've objected several times.

01:52:52 8 THE COURT: Are you talking about during the  
01:52:54 9 trial, or are you talk about during pre-trial?

01:52:56 10 MR. MELSHEIMER: During -- during pre-trial. I  
01:52:58 11 just objected that it was misleading and misstating his  
01:53:02 12 testimony. You overruled the objection.

01:53:04 13 We've talked about the issue of comparing the spec  
01:53:07 14 to the accused product. This is the mess -- and,  
01:53:09 15 Your Honor, I'm just -- this is the potential of creating a  
01:53:12 16 mess if we are -- we are not allowed to make these  
01:53:16 17 corrections with this witness. It's not fair to not let us  
01:53:20 18 do that.

01:53:22 19 Obviously, Dr. Villasenor will have his own  
01:53:24 20 opinions, but Mr. Saffici, everyone at this bench knows,  
01:53:28 21 that that man did not offer a non-infringement -- a  
01:53:31 22 non-infringement opinion. Didn't happen.

01:53:34 23 MR. ROWLES: Your Honor, we have --

01:53:35 24 THE COURT: Let me hear from Mr. Rowles.

01:53:37 25 MR. ROWLES: We have no problem with him

01:53:39 1 establishing that Mr. Saffici was not an infringement  
01:53:41 2 expert. However, he was a claim construction expert.

01:53:43 3 The question that was posed to Professor Conte had  
01:53:46 4 to do with the plain and ordinary meaning of the word  
01:53:48 5 "capture" to a person of ordinary skill in the art, which  
01:53:51 6 is something that Mr. Saffici opined on.

01:53:53 7 So I think that we should be permitted to tell the  
01:53:56 8 jury that he was a claim construction expert for Wells  
01:53:58 9 Fargo if this is where we're going to go.

01:54:00 10 MR. MELSHEIMER: Your Honor, the claim  
01:54:01 11 construction is not the jury's job. They're simply told  
01:54:04 12 that you do that, and they don't get into that. All that  
01:54:07 13 would be -- to me would be unheard of to tell them  
01:54:10 14 something like that.

01:54:11 15 All I want to establish is that this --  
01:54:14 16 Your Honor, they're trying to show some expert we hired  
01:54:18 17 said we infringe, and that's why we can't -- that's exactly  
01:54:21 18 the point they're trying to make. That's unfair. You  
01:54:24 19 shouldn't let them do that. We should get an instruction  
01:54:26 20 that says that's improper.

01:54:28 21 THE COURT: Wait a minute. Wait a minute. You're  
01:54:30 22 at the podium now. They -- you know, you're back for  
01:54:33 23 additional cross-examination. And you're telling me that  
01:54:38 24 during the redirect, they created this odor, as you put it,  
01:54:44 25 that you had one objection that I overruled and that's the

01:54:47 1 source of all this odor that you're trying to correct?

01:54:50 2 MR. MELSHEIMER: Your Honor, I'm entitled, I  
01:54:51 3 believe, to make my own judgments about what's appropriate  
01:54:54 4 to object versus what's appropriate to cross-examine a  
01:54:56 5 witness on.

01:54:57 6 THE COURT: You are, but you're not entitled to  
01:54:59 7 sit there, not object, and then tell me when they get back  
01:55:02 8 up to the podium they've created this horrible mess that I  
01:55:05 9 now have to fix.

01:55:06 10 MR. MELSHEIMER: Your Honor -- well, to be clear,  
01:55:10 11 all I'm asking is that you let me inquire. I'm not asking  
01:55:15 12 for you to fix anything, actually. I'm asking right now in  
01:55:18 13 line with this objection that I be allowed to ask these  
01:55:21 14 questions and clear this up, or else it will be an odor.

01:55:26 15 THE COURT: Tell me precisely, Mr. Melsheimer,  
01:55:29 16 what you're proposing to ask of this witness on cross.

01:55:31 17 MR. MELSHEIMER: That he -- that he didn't do an  
01:55:33 18 infringement analysis; that he wasn't an infringement  
01:55:35 19 expert; that he didn't review all the source code; and that  
01:55:38 20 he's never seen an infringement opinion from this witness  
01:55:41 21 one way or the other.

01:55:42 22 THE COURT: And you're talking about -- you're not  
01:55:44 23 asking Professor Conte this about Professor Conte. You're  
01:55:48 24 asking Professor Conte this about who?

01:55:51 25 MR. MELSHEIMER: Mr. Saffici, because Mr. Saffici

01:55:53 1 was brought up in the redirect. That's the only reason  
01:55:57 2 this is coming up. And they asked him, Your Honor: Does  
01:56:02 3 Mr. Saffici agree with you and Wells Fargo? That was my  
01:56:05 4 objection. But in any event, I think I can --

01:56:09 5 THE COURT: You can ask the witness if his  
01:56:12 6 understanding is that Mr. Saffici was not an infringement  
01:56:16 7 expert and did not offer an infringement opinion.

01:56:18 8 MR. MELSHEIMER: And did not review source code.

01:56:20 9 THE COURT: No, those two questions. I'll permit  
01:56:23 10 that. Because, quite honestly, I'm going to keep this  
01:56:27 11 under -- I'm concerned that this will get out of hand if I  
01:56:31 12 let you all do what you each think you need to do.

01:56:35 13 So I'm going to prescribe what you can do. And in  
01:56:37 14 light of what's happened so far, I'm going to permit the  
01:56:40 15 Defendant to ask this witness to identify that Mr. Saffici  
01:56:44 16 is not an infringement expert in this case and did not  
01:56:48 17 offer a formal non-infringement opinion. And then you're  
01:56:51 18 going to -- then we're going to move on to something else.

01:56:54 19 MR. MELSHEIMER: Understood, Your Honor.

01:56:54 20 THE COURT: All right. That's my ruling.

01:56:56 21 (Bench conference concluded.)

01:57:05 22 THE COURT: Let's proceed.

01:57:06 23 MR. MELSHEIMER: May it please the Court.

01:57:06 24 Q. (By Mr. Melsheimer) Dr. Conte, you know that  
01:57:11 25 Mr. Saffici was not a non-infringement expert in this case

01:57:14 1 for Wells Fargo, correct?

01:57:18 2 A. I -- I believe that's true.

01:57:20 3 Q. And you know also, because he wasn't a non-infringement

01:57:24 4 expert for Wells Fargo, that he did not offer a

01:57:29 5 non-infringement opinion for Wells Fargo, true?

01:57:31 6 A. I believe that's correct.

01:57:36 7 Q. You were asked a question about Dr. Villasenor, whether

01:57:44 8 or not he reviewed the code in Dallas. Do you remember

01:57:49 9 that question?

01:57:50 10 A. Yes.

01:57:50 11 Q. You weren't trying to suggest that he didn't review the

01:57:53 12 code, were you?

01:57:54 13 A. I don't recall any indication in his report that he

01:57:56 14 did.

01:57:57 15 Q. So is it your view --

01:57:59 16 THE COURT: Counsel, approach the bench.

01:58:01 17 (Bench conference.)

01:58:10 18 THE COURT: Mr. Melsheimer, you specifically asked

01:58:12 19 me for permission to go into whether Mr. Saffici reviewed

01:58:15 20 the code when you were at the bench 30 seconds ago, and I

01:58:18 21 told you no. And you just asked this witness that.

01:58:21 22 MR. MELSHEIMER: Your Honor, I did not.

01:58:23 23 Respectfully, I asked Dr. Villasenor --

01:58:25 24 THE COURT: You said --

01:58:26 25 MR. MELSHEIMER: They made the point -- this was

01:58:28 1 in direct response to a cross -- redirect question. If I  
01:58:31 2 said Saffici --

01:58:34 3 THE COURT: You said "he" following all the  
01:58:36 4 questions about Saffici.

01:58:37 5 MR. MELSHEIMER: Well, Your Honor, I'll make it  
01:58:38 6 very clear. I was in no way -- I was trying to address  
01:58:41 7 this point.

01:58:41 8 THE COURT: Clarify it was not Saffici.

01:58:45 9 MR. MELSHEIMER: I will do that. I will do that.

01:58:48 10 (Bench conference concluded.)

01:58:51 11 THE COURT: Let's proceed. Restate your question,  
01:58:53 12 counsel.

01:58:53 13 MR. MELSHEIMER: May it please the Court.

01:58:54 14 Q. (By Mr. Melsheimer) Dr. Conte, my question's about  
01:58:57 15 Dr. Villasenor. Are you with me?

01:58:58 16 A. Yes.

01:59:01 17 Q. And your -- is it your testimony that Dr. Villasenor  
01:59:05 18 did not review the source code in this case?

01:59:07 19 A. I don't recall a section in his report where he said he  
01:59:11 20 did.

01:59:12 21 Q. You were shown some information from the specification  
01:59:22 22 of the patent on your redirect examination?

01:59:25 23 A. Yes.

01:59:25 24 Q. You understand, don't you, that infringement -- that  
01:59:30 25 someone cannot infringe the specification of a patent; it

01:59:34 1 has to be infringement of a claim of a patent? You  
01:59:37 2 understand that, right?

01:59:39 3 A. Yes.

01:59:48 4 Q. And with respect to exhibit -- the Paragraph 83 of your  
01:59:59 5 report, sir, I just want to end with that. You were asked  
02:00:11 6 about this in your -- in your redirect examination.

02:00:19 7 MR. MELSHEIMER: Your Honor, may I approach the  
02:00:21 8 counsel table to get a highlighter?

02:00:23 9 THE COURT: Yes, you may.

02:00:25 10 Q. (By Mr. Melsheimer) And I believe your testimony was  
02:00:33 11 that it was not sequential?

02:00:36 12 A. No. My testimony was that these were not ordered  
02:00:44 13 steps. I'm an engineer. Sorry.

02:00:47 14 Q. So you view sequence as being something different from  
02:00:52 15 the ordered steps. I want to use your words.

02:00:54 16 Ordered -- you don't view these as ordered steps  
02:00:57 17 is what you're telling the jury, right, but you don't  
02:01:01 18 disagree --

02:01:03 19 THE COURT: Well, let's let him answer your first  
02:01:06 20 question before you ask the next question.

02:01:09 21 MR. MELSHEIMER: I'm sorry, Your Honor.

02:01:10 22 THE COURT: You asked him if he -- let's see.

02:01:12 23 Q. (By Mr. Melsheimer) You don't view these as ordered  
02:01:14 24 steps, correct?

02:01:15 25 A. That's correct.



02:01:15 1 THE COURT: Okay.

02:01:16 2 Q. (By Mr. Melsheimer) But the first thing in your list  
02:01:20 3 is image capture, right?

02:01:22 4 A. Specifically, it's image capture, front and rear, auto  
02:01:29 5 and manual capture modes.

02:01:30 6 Q. And this thing on the bottom, corners tracking, do you  
02:01:36 7 see that?

02:01:37 8 A. Yes.

02:01:39 9 Q. Are you saying that should go in IQA threshold checking  
02:01:43 10 or somewhere else?

02:01:53 11 A. When I wrote this, I put it as a separate feature.

02:01:57 12 Q. But are you saying now, upon reflection, in front of  
02:02:00 13 the ladies and gentlemen of the jury, that you believe that  
02:02:02 14 corners tracking actually should be part of IQA threshold  
02:02:06 15 checking?

02:02:06 16 A. I wouldn't quite put it that way.

02:02:11 17 Q. Where would you put it, sir? Would you put it -- would  
02:02:14 18 you put it No. 2, 2A, or 3?

02:02:17 19 A. These are not sequential, sir.

02:02:24 20 Q. Well, you would put it before IQA threshold checking,  
02:02:28 21 right aligned with IQA threshold checking, or after IQ --  
02:02:34 22 IQA threshold checking in this chart?

02:02:37 23 A. These are not sequential, sir. I wouldn't change the  
02:02:41 24 order that I wrote these in because they're not sequential.

02:02:43 25 Q. Where does corners tracking occur, sir, in the Mitek

02:02:49 1 auto snap -- auto capture -- that's a word salad.

02:02:54 2 Where does image -- where does corners tracking  
02:03:00 3 occur in the Mitek MiSnap software, sir?

02:03:04 4 A. In the iPhone version, it occurs in analyze frame.

02:03:14 5 Q. Is that the same thing as IQA threshold check?

02:03:18 6 A. IQA threshold checking was a Mitek, I believe, term for  
02:03:24 7 aspects of monitoring criteria.

02:03:26 8 Q. And is that the same thing as what you just described?

02:03:29 9 A. No, it's not the same thing.

02:03:30 10 Q. But those are the words that you used, IQA threshold  
02:03:35 11 checking?

02:03:35 12 A. Yes.

02:03:36 13 Q. The source code you looked at had a title called  
02:03:55 14 DevApp. Do you recall that?

02:03:57 15 A. I need to see it. I'm sorry.

02:04:03 16 Q. The version of the software you looked at was what's  
02:04:07 17 called a DevApp version. Do you know that or not?

02:04:11 18 A. I don't recall it being called DevApp.

02:04:15 19 Q. Do you have any understanding of what DevApp means?

02:04:18 20 A. I would have to speculate.

02:04:21 21 Q. I don't want you to do that. Thank you, sir.

02:04:26 22 MR. MELSHEIMER: Your Honor, pass the witness.

02:04:27 23 THE COURT: All right. Does the Plaintiff have  
02:04:28 24 further redirect?

02:04:30 25 MR. ROWLES: No, Your Honor.

02:04:31 1 THE COURT: Then, Professor Conte, you may step  
02:04:32 2 down.

02:04:33 3 THE WITNESS: Thank you, sir.

02:04:39 4 THE COURT: Plaintiff, call your next witness.

02:04:41 5 MS. GLASSER: USAA calls Mr. Matthew Calman.

02:04:47 6 Your Honor, permission for Mr. Sheasby to assist  
02:04:52 7 in the handing out of binders?

02:04:53 8 THE COURT: That will be fine.

02:04:55 9 If you'll come forward and be sworn, sir.

02:05:06 10 (Witness sworn.)

02:05:11 11 THE COURT: If you'll come around, sir, and have a  
02:05:13 12 seat on the witness stand.

02:05:14 13 Mr. Calman, I understand you have a medical  
02:05:16 14 condition that may require you to put an eyedrop in your  
02:05:18 15 eyes from time to time?

02:05:19 16 THE WITNESS: Yes, sir, that's correct.

02:05:20 17 THE COURT: You have permission to do that if you  
02:05:22 18 need to.

02:05:23 19 THE WITNESS: Thank you.

02:05:25 20 MR. SHEASBY: Your Honor, may I clear the binders?

02:05:27 21 THE COURT: Yes, you may.

02:05:54 22 All right. Ms. Glasser, you may proceed.

02:05:57 23 MS. GLASSER: Thank you, Your Honor.

02:05:57 24 MATTHEW CALMAN, PLAINTIFF'S WITNESS, SWORN

02:05:57 25 DIRECT EXAMINATION

02:05:57 1 BY MS. GLASSER:

02:05:57 2 Q. Good afternoon, Dr. -- Mr. Calman.

02:06:00 3 A. Good afternoon.

02:06:01 4 Q. Could you please start by describing for us at a high  
02:06:05 5 level your professional background?

02:06:07 6 A. Sure. I'm happy to.

02:06:09 7 So I began --

02:06:13 8 Q. Let me pause you. It looks like we're having a little  
02:06:16 9 bit of an EV issue.

02:06:18 10 MS. GLASSER: Mr. Huynh?

02:06:25 11 I'm so sorry, Your Honor. Permission to approach  
02:06:29 12 Mr. Huynh?

02:06:30 13 THE COURT: Take a -- take a moment. Let's get it  
02:06:32 14 straight at the beginning.

02:07:09 15 MS. GLASSER: Apologies to Your Honor and the  
02:07:11 16 ladies and gentlemen of the jury. We'll just go ahead and  
02:07:13 17 manually advance them so we don't keep folks waiting.

02:07:16 18 THE COURT: That will be fine.

02:07:19 19 MS. GLASSER: May we please have the next slide?

02:07:22 20 Q. (By Ms. Glasser) Mr. Calman, could you please describe  
02:07:24 21 for us an overview of your professional background?

02:07:26 22 A. Sure. Happy to. So my name is Matthew Calman. I  
02:07:30 23 attended a couple of years of college at Carnegie-Mellon  
02:07:32 24 University. I was a math major for those years. I didn't  
02:07:36 25 graduate. I went straight to work. I was ready to go.

02:07:39 1 And I went to work in the financial services  
02:07:41 2 industry. Years later, I went back and got my MBA, my  
02:07:46 3 Master's in business administration at Georgia State  
02:07:50 4 University.

02:07:50 5 Q. And let me pause you there. Sir, did you receive any  
02:07:53 6 academic honors while you were receiving your graduate  
02:07:56 7 degree?

02:07:57 8 A. I did. I won the George J. Malanos Award for academic  
02:08:05 9 excellence for being No. 1 in my class.

02:08:08 10 Q. Would you please describe an overview of your industry  
02:08:11 11 experience at Bank of America?

02:08:12 12 A. So the bulk of my career was at Bank of America. I was  
02:08:15 13 there for 27 years in a variety of operations and  
02:08:20 14 technology leadership roles. I've highlighted two relevant  
02:08:25 15 positions while I was at the bank.

02:08:27 16 The first, I was process design executive for what  
02:08:33 17 was the image transformation -- transforming the bank's  
02:08:37 18 paper traditional check processing to image processing.  
02:08:42 19 And in doing that, I led a team with about 400  
02:08:48 20 technologists and business analysts through all the aspects  
02:08:52 21 of modifying our systems and our processes and procedures  
02:08:54 22 to handle image instead of paper.

02:08:56 23 Q. Sir, at that point in time, can you give us a sense,  
02:09:01 24 how was check imaging done in the banking system?

02:09:06 25 A. Well, thinking back, you have to imagine sort of check

02:09:11 1 factories. We had almost two dozen processing centers at  
02:09:15 2 Bank of America with hundreds and some with thousands of  
02:09:19 3 workers operating specialized equipment, these large check  
02:09:22 4 scanners, large trays full of checks, many, many, many  
02:09:24 5 checks.

02:09:25 6 And these processing systems and machines would  
02:09:27 7 run -- some machines ran as fast as a hundred thousand  
02:09:31 8 documents per hour. So, really, industrial scale equipment  
02:09:34 9 in order to process the millions of checks we had to get  
02:09:37 10 through every day.

02:09:38 11 Q. Opposing counsel mentioned earlier today something  
02:09:43 12 called Check 21, and we went through that pretty quickly.  
02:09:48 13 Can you give us an overview of what is check 21 and what  
02:09:52 14 was your involvement with that?

02:09:53 15 A. So this was the law that was passed in 2003, and then  
02:09:58 16 we had one year before it became effective in 2004 to do  
02:10:01 17 this big image transformation that I was speaking of.

02:10:04 18 And what Check 21 did, essentially, was to allow  
02:10:08 19 an image of a check to be the legal equivalent of the  
02:10:12 20 original check. So that -- kind of like email versus  
02:10:15 21 postal mail.

02:10:17 22 And so instead of having to move these many  
02:10:20 23 millions of checks per day all over the country, in some  
02:10:23 24 cases by jet aircraft, private jets flying checks around,  
02:10:27 25 we could now use the power of image to make those kinds of

02:10:33 1 transfers happen much, much quicker, much cheaper, and more  
02:10:37 2 reliably.

02:10:38 3 Q. What was your personal involvement in Check 21?

02:10:41 4 A. So for me, it was all about implementation, and taking  
02:10:47 5 these new rules and making them real, bringing that to life  
02:10:52 6 with bank operations that ran on image instead of on paper.

02:10:56 7 Q. Now, tell us about your roles starting in 2006 when you  
02:11:04 8 shifted into the position of research and development  
02:11:07 9 executive?

02:11:07 10 A. So after a couple of years of work on this  
02:11:10 11 implementation of check image, I became an R&D, or research  
02:11:16 12 and development, executive at the bank. And I ran gateway  
02:11:20 13 innovation lab, which was a lab environment where we worked  
02:11:22 14 to bring other new technologies that were just emerging,  
02:11:25 15 just coming into existence and coming into use, and how  
02:11:30 16 those might find their way into future products and apps  
02:11:33 17 for the bank.

02:11:34 18 And so I've listed a couple here. Biometrics, you  
02:11:38 19 know, so you can use your thumb to unlock your phone.  
02:11:41 20 Augmented reality. And, in fact, my team built Bank of  
02:11:45 21 America's first prototype for mobile deposit.

02:11:53 22 Q. What time frame were you working on the mobile deposit  
02:11:57 23 prototype?

02:11:57 24 A. So that prototype in particular was at the end of 2008,  
02:12:02 25 first few months of 2009.

02:12:04 1 Q. And back at that time frame, was the prototype  
02:12:09 2 successful from a commercial viability standpoint?

02:12:12 3 A. At this point, the prototype was just primitive. At  
02:12:17 4 that time, really the common belief within the check  
02:12:20 5 processing industry was that cell phones couldn't do that  
02:12:23 6 sort of thing. So this prototype proved in Bank of  
02:12:27 7 America's test environment that you actually could capture  
02:12:31 8 check images with a phone and get them all the way through  
02:12:34 9 to successfully deposit.

02:12:37 10 Q. And you said it wasn't commercially valuable -- viable.  
02:12:41 11 Can you elaborate on why that was the case?

02:12:44 12 A. Well, this was, again -- it was just a test system. It  
02:12:48 13 wasn't even a real app, per se. It was just enough, just  
02:12:52 14 enough to demonstrate that some images, not all of them,  
02:12:56 15 but some images could be captured with a phone of the day,  
02:13:00 16 and processed all the way through to deposit.

02:13:02 17 Q. And did you ever work with the vendor, who's been  
02:13:06 18 mentioned a few times here in the courtroom, called Mitek?

02:13:10 19 A. We did. Their software was involved in that primitive  
02:13:14 20 prototype I mentioned.

02:13:15 21 Q. Was that software manual capture at that time or auto  
02:13:19 22 capture?

02:13:19 23 A. Oh, it was manual capture. We -- that was it.

02:13:25 24 Q. When you left Bank of America in 2013, did Bank of  
02:13:31 25 America yet have a commercially available auto capture



02:13:35 1 product?

02:13:35 2 A. No, not yet.

02:13:37 3 Q. Approximately how far behind USAA was the rest of the  
02:13:44 4 industry at that time?

02:13:45 5 A. Well, for -- certainly for Bank of America, we were  
02:13:49 6 three years behind. Bank of America didn't release its  
02:13:52 7 manual capture solution until 2012. And it wasn't -- as I  
02:13:56 8 said, as you said, until after I left, that they even  
02:14:00 9 released auto capture.

02:14:01 10 Q. Did USAA have a reputation in the industry?

02:14:06 11 A. Well, yes, they were the pioneer. They invented this  
02:14:10 12 whole -- this whole technology and capability to use a  
02:14:14 13 smartphone to capture an image of a check of sufficient  
02:14:17 14 quality to make it all the way through to deposit.

02:14:21 15 Q. Now, sir, are you personally the inventor on any  
02:14:25 16 patents?

02:14:25 17 A. I am.

02:14:28 18 Q. Approximately how many, if you know?

02:14:30 19 A. I'm a named inventor on 96 issued U.S. patents.

02:14:36 20 Q. Sir, you left Bank of America in 2013; is that right?

02:14:42 21 A. That's right.

02:14:42 22 Q. Are you employed today?

02:14:43 23 A. Yes. I have my own consultancy. At that point, our  
02:14:47 24 kids were grown and out of the house, and it seemed like a  
02:14:50 25 good time to start my own thing.

02:14:51 1 Q. What do you do as part of your consultancy?

02:14:57 2 A. So I consult to U.S. and Canadian banks and banking  
02:15:03 3 software companies on things like innovation.

02:15:06 4 Q. Did USAA retain you to perform consulting work and  
02:15:10 5 analysis in connection with this case?

02:15:11 6 A. They did.

02:15:12 7 Q. Are you being paid for your work on this case, sir?

02:15:14 8 A. I am. My customary rate for this work is 550 per hour.

02:15:19 9 Q. Is that compensation in any way at all dependent on the  
02:15:22 10 substance of your opinions or the outcome of this case?

02:15:26 11 A. No, not at all.

02:15:28 12 MS. GLASSER: Your Honor, USAA tenders Mr. Calman  
02:15:31 13 as an expert on banking technology and operations.

02:15:34 14 THE COURT: Is there objection?

02:15:35 15 MR. MELSHEIMER: May it please the Court. No  
02:15:37 16 objection, Your Honor.

02:15:37 17 THE COURT: All right. Then the Court recognizes  
02:15:40 18 this witness as an expert in those designated fields.

02:15:42 19 Continue, please.

02:15:45 20 MS. GLASSER: Could we have the next slide,  
02:15:48 21 please?

02:15:48 22 Your Honor, may I approach to receive the clicker?

02:15:51 23 THE COURT: You may.

02:15:52 24 MS. GLASSER: Thank you very much.

02:16:11 25 Q. (By Ms. Glasser) Did you form any opinions relating to

02:16:14 1 the value of the USAA patents that are at issue in this  
02:16:16 2 lawsuit?

02:16:16 3 A. I did. As we have on the slide, I had a couple of  
02:16:23 4 assignments. I was -- and opinions that resulted from that  
02:16:26 5 work.

02:16:27 6 First, I've rendered my opinion on the  
02:16:31 7 significance of auto capture and that it is a must-have  
02:16:35 8 technology necessary for really any commercially viable  
02:16:39 9 MRDC, or mobile remote deposit capture system.

02:16:45 10 And, as well, I was asked to do an apportionment  
02:16:48 11 analysis, and what that means is I was asked to isolate the  
02:16:53 12 value of the MRDC channel or system attributable solely to  
02:16:59 13 the patented USAA auto capture portion.

02:17:04 14 And my conclusion -- and we'll talk through this,  
02:17:06 15 of course -- but my conclusion was that at least 40 percent  
02:17:10 16 of the total value of this new MRDC channel is attributable  
02:17:15 17 to auto capture.

02:17:16 18 Q. Before we get into the details of your opinions, what  
02:17:20 19 sorts of information did you review in order to assess  
02:17:24 20 those issues?

02:17:25 21 A. So on the next slide, we've got a list. I worked  
02:17:30 22 through many different types of information. Of course,  
02:17:33 23 the USAA's asserted patents, number one, as well as system  
02:17:39 24 documentation, business documents, both, you know, email  
02:17:43 25 and presentations and those kinds of things, mobile deposit

02:17:48 1 data, the actual operational data that these systems report  
02:17:52 2 themselves, testimony from other witnesses, industry  
02:17:57 3 reports, marketing materials, as well as source code  
02:18:02 4 alongside Dr. Conte.

02:18:04 5 Q. Did you review testimony by any of the Wells Fargo  
02:18:09 6 experts?

02:18:09 7 A. I did.

02:18:10 8 Q. And did you find that, at a high level, there were any  
02:18:13 9 areas of agreement that you had with any of Wells Fargo's  
02:18:17 10 experts?

02:18:18 11 A. Yes, indeed. And on this slide, we see Mr. Bill  
02:18:23 12 Saffici, who I knew in the industry. And we agree that the  
02:18:27 13 patents-in-suit introduce autonomous monitor and corrective  
02:18:34 14 feedback. That's what these patents are all about.

02:18:36 15 Mr. Saffici and I agree that those are referred to  
02:18:39 16 in the industry in jargon as auto capture. That's what it  
02:18:44 17 is.

02:18:44 18 And that the patents claim a technique to obtain  
02:18:49 19 an image of sufficient quality that the deposit will be  
02:18:51 20 successful in all those downstream systems. And, again,  
02:18:54 21 Mr. Saffici and I agree.

02:18:55 22 Q. Focusing on that concept of having an image of  
02:19:00 23 sufficient quality, could you explain for us, is there a  
02:19:03 24 difference between what a human eye views as sufficient  
02:19:08 25 quality for a check and what a machine processing it

02:19:12 1 ultimately will view as sufficient?

02:19:14 2 A. Yes, indeed. And you've heard this discussed before,  
02:19:18 3 but I'll reaffirm that there is indeed a difference between  
02:19:22 4 what a human can do in terms of looking at a document and  
02:19:24 5 reading the information on a document versus what a  
02:19:28 6 computer can do.

02:19:30 7 And it's not so easy for a human to know for sure  
02:19:33 8 what's going to be readable by a computer, and there's  
02:19:36 9 variations between people as to, you know, you may think  
02:19:40 10 it's readable, I may not. But a computer knows what a  
02:19:44 11 computer can read.

02:19:45 12 Q. What about between individual people, is there any  
02:19:50 13 substantial variation between how easy or how hard it is  
02:19:54 14 for individual people to capture useable check images?

02:19:58 15 A. Oh, well, yes. On the one hand, for some people, it's  
02:20:03 16 really easy. It's even fun to -- to do a check capture.

02:20:08 17 For other people, it's difficult -- even very  
02:20:11 18 difficult to get the system to work for them. There's  
02:20:13 19 just -- people are different, and they use -- whenever  
02:20:17 20 there's humans and technology coming together, it works  
02:20:21 21 differently for each person.

02:20:22 22 Q. And how does auto capture assist with that  
02:20:26 23 differentiation between people?

02:20:27 24 A. Well, the whole concept here is to improve or increase  
02:20:32 25 the number of conforming images. And so if we take the

02:20:36 1 human out of the equation, and we let the computer to  
02:20:39 2 decide what a computer can read, it opens up access to the  
02:20:43 3 mass market.

02:20:44 4           It means that instead of just those techies, you  
02:20:47 5 know, who are really good at apps being the ones who can  
02:20:50 6 use mobile remote deposit capture successfully, it means  
02:20:53 7 everyone. The mass market has a good chance of being  
02:20:56 8 successful.

02:20:59 9 Q. Now, turning to the next slide, I think this may have  
02:21:02 10 been mentioned briefly during the openings, but can you  
02:21:05 11 identify for the jury exactly what is this document along  
02:21:09 12 with this exhibit number?

02:21:10 13 A. So the yellow sticker, it's Plaintiff's Exhibit --  
02:21:14 14 excuse me -- Plaintiff's Exhibit No. 5. This is a two --  
02:21:20 15 2017 industry benchmarking report comparing the top 15  
02:21:25 16 banks and their mobile remote deposit capture solutions.  
02:21:29 17 And this is by a specialty consulting firm named Futurion.  
02:21:32 18 So you may have heard this Futurion report mentioned.

02:21:35 19 Q. When you say the top 15 banks being the focus of this  
02:21:38 20 particular study, how did this entity identify the 15?

02:21:43 21 A. Sure. Typically, this is the -- you know, big banks,  
02:21:46 22 the size of their assets, the largest banks, as measured by  
02:21:51 23 dollars and cents.

02:21:52 24 Q. So not necessarily in terms of quality, but just total  
02:21:55 25 number of deposits?

02:21:56 1 A. Or asset size. Total deposits in the bank.

02:22:00 2 Q. Now, how does this 2017 industry report relate to what  
02:22:06 3 you were describing about the difference between a human  
02:22:10 4 and a machine's ability to determine sufficiency?

02:22:17 5 A. This is just what I was talking about. The major  
02:22:20 6 impediment to mobile deposit is the inability to get a  
02:22:24 7 clear picture. We have to be able to see the information  
02:22:27 8 on the face of the check in order for that image to be a  
02:22:30 9 legal replacement for that original paper document.

02:22:32 10 And so if the major impediment is getting a good  
02:22:36 11 picture, what auto capture did was alleviate that obstacle  
02:22:41 12 and make it possible for many, many more people to be  
02:22:44 13 successful with mobile remote deposit capture.

02:22:45 14 Q. Did you have the opportunity to review any Wells Fargo  
02:22:50 15 expert testimony on this specific issue?

02:22:53 16 A. I did. And, again, Mr. Saffici and I are in total  
02:22:56 17 agreement that auto capture is widely acknowledged in the  
02:23:03 18 industry as the foundation for a successful mobile  
02:23:07 19 remote -- mobile check deposit system.

02:23:09 20 Q. You mentioned earlier that some of the initial mobile  
02:23:15 21 deposit systems were manual capture; is that right?

02:23:17 22 A. Yes.

02:23:17 23 Q. So why is it the case that today, auto capture is the  
02:23:22 24 foundation for successful mobile deposit?

02:23:24 25 A. Well, when mobile remote deposit capture first came out

02:23:30 1 as a manual solution, it was successful. It was even more  
02:23:33 2 successful than expected. But that performance wasn't  
02:23:39 3 sustainable with the current technology of that day, with  
02:23:42 4 manual only. And that was for two reasons.

02:23:44 5 First, the error rates with that manual capture  
02:23:54 6 solution were much worse than with traditional paper  
02:23:55 7 processing or traditional image processing when you would  
02:23:56 8 go to an ATM or go to a teller.

02:23:58 9 And, second, it was those early adopters. It was  
02:24:03 10 the tech savvy people who first started using it. And in  
02:24:06 11 order to expand beyond that small group, something had to  
02:24:09 12 be done.

02:24:10 13 And so that something was auto capture.

02:24:15 14 Q. Did USAA and its customers, its members, experience  
02:24:23 15 these benefits that you've been describing, after the  
02:24:26 16 technology was introduced in 2013?

02:24:28 17 A. Yes, indeed. Auto capture had a noticeable improvement  
02:24:32 18 at USAA.

02:24:33 19 Q. Have you seen any actual numerical data on whether the  
02:24:37 20 patented auto capture technology increased acceptance rates  
02:24:41 21 or otherwise stated, decreased failure rates at USAA?

02:24:46 22 A. I did.

02:24:47 23 Q. What are we looking at here?

02:24:48 24 A. So on this slide, we're demonstrating that auto capture  
02:24:53 25 significantly reduced the failure rate.



02:24:57 1 So on the left, April 2013, we have the full  
02:25:01 2 month's performance on the iOS, the Apple app. In the full  
02:25:08 3 month before auto capture came along, USAA's members had a  
02:25:11 4 15.97 percent failure rate, roughly 16 percent.

02:25:17 5 On the right, in the full month of June, after  
02:25:21 6 auto capture was launched, those same users in iOS  
02:25:26 7 experienced 9.31 percent. And what changed in the middle?  
02:25:31 8 Well, what changed was auto capture. Auto capture came in.

02:25:34 9 And that's a -- but the difference between this  
02:25:38 10 nearly 16 percent and this little more than 9 percent, the  
02:25:42 11 difference there is 6.6 percentage points.

02:25:47 12 But keep in mind that's just the percentage  
02:25:49 13 points. The actual rate of failure decrease was 41.69  
02:25:54 14 percent. That's a big difference.

02:25:56 15 Q. Sir, can you elaborate on that 41 percent term, how you  
02:26:00 16 derived it, and how it relates to the impact on the actual  
02:26:04 17 people, the customers?

02:26:05 18 A. Sure. And you're going to hear a lot of talk about  
02:26:08 19 percentages today and -- and error rates and so forth. But  
02:26:11 20 to put it in human terms, think of a hundred users. Before  
02:26:17 21 auto capture, almost 16 people out of a hundred using the  
02:26:20 22 app had errors.

02:26:23 23 After auto capture, it was much closer to about 9  
02:26:27 24 people out of a hundred that were having errors. That's  
02:26:30 25 the difference in human terms, and that's a reduction of

02:26:34 1 about 42 percent between those 16 or so people and those  
02:26:39 2 nine or so people out of each 100 that were having errors.

02:26:45 3 Q. Now, why is it particularly relevant to focus on iOS,  
02:26:50 4 the Apple operating system for this data point?

02:26:52 5 A. Sure. So at that point in time, three-quarters of the  
02:26:58 6 USAA app users for MRDC were using iPhone. Only  
02:27:02 7 one-quarter were using Android. And USAA released Android  
02:27:07 8 a couple of months later.

02:27:09 9 Q. Were there any other differences in terms of how  
02:27:13 10 accessible calculations were on iOS versus on Android?

02:27:17 11 A. Well, so this was in 2013. And keep in mind that there  
02:27:22 12 were a lot of Android phones then that just didn't run apps  
02:27:25 13 as consistently the way that iPhones all sort of ran apps  
02:27:31 14 consistently. So there was some difference in the iOS  
02:27:35 15 data, as compared to the Android data, based upon sort of  
02:27:41 16 differences in the phones people were using at that time.

02:27:44 17 Q. Were you able to obtain access in this litigation to  
02:27:48 18 Wells Fargo's documents discussing Wells Fargo's failure  
02:27:55 19 rates?

02:27:56 20 A. Yes, I was.

02:27:56 21 Q. Did Wells Fargo provide any information regarding what  
02:28:00 22 its expectations were for how much auto capture would  
02:28:05 23 decrease its failure rates?

02:28:06 24 A. They did, yes. So we know from several documents and  
02:28:14 25 places in USAA -- excuse me, in Wells Fargo's history and

02:28:17 1 documents, that they expected this similar kind of  
02:28:20 2 significant failure reduction.

02:28:23 3 So Mr. Ajami, who is a senior vice president at  
02:28:27 4 Wells Fargo, anticipated a 75 to 90 percent increase in  
02:28:31 5 success. So to go from a 75 percent rate to 90 percent  
02:28:36 6 after auto capture, and he promoted this in several  
02:28:40 7 documents that we saw.

02:28:41 8 For example, we've got PX-489 here. And you'll  
02:28:45 9 see that's called a mobile roadmap. Oftentimes inside  
02:28:50 10 banks, a roadmap document is used to explain features that  
02:28:53 11 are coming down the road. Next couple of years, here's the  
02:28:56 12 stuff we're going to add. It's not ready yet, but it's  
02:28:59 13 coming.

02:29:02 14 And in this page from July 20th of 2013, was  
02:29:08 15 mobile deposit Phase 2, where it talked about auto capture  
02:29:12 16 and what was auto capture? Auto capture checks images --  
02:29:17 17 check images when the good image is available instead of  
02:29:20 18 the customer having to guess.

02:29:21 19 And the improved -- the expect -- their  
02:29:24 20 expectation was to improve image take rates from 75 percent  
02:29:27 21 to over 90 percent. The same kind of before and after we  
02:29:31 22 just looked at.

02:29:31 23 Q. Based on the testimony of Wells Fargo witnesses and the  
02:29:36 24 Wells Fargo documents you were given access to, did you  
02:29:38 25 have an understanding or did you develop an understanding

02:29:41 1 of what Wells Fargo's goals were with respect to  
02:29:46 2 introducing auto capture?

02:29:46 3 A. Yes, I did.

02:29:50 4 So, again, we have Mr. Ajami expressing that --  
02:29:54 5 that Wells Fargo knew they needed low failure rates. Their  
02:29:59 6 objective was to provide the most -- provide the simplest  
02:30:03 7 experience possible and to provide the lowest rate of  
02:30:06 8 exceptions and rejected checks. That was the objective.

02:30:10 9 Q. Now, did Wells Fargo also produce in the litigation its  
02:30:14 10 data on actual acceptance and failure rates for manual  
02:30:19 11 versus auto capture?

02:30:20 12 A. Yes. This was some of the operational data that I  
02:30:22 13 mentioned earlier in that list of things I looked at.

02:30:26 14 Q. And what was the source for the operational data that  
02:30:30 15 you reviewed?

02:30:31 16 A. So Ms. Lockwood-Stein was formerly designated by Wells  
02:30:38 17 Fargo to be their corporate representative and testify on  
02:30:42 18 the benefits of auto capture. I relied upon the data she  
02:30:47 19 provided and presented on MRDC failure rates.

02:30:51 20 So what we have below in PX-26 is the actual  
02:30:56 21 source of where did this data come from that I relied upon.  
02:31:00 22 And if you look at the second highlighted section, the  
02:31:03 23 source of the data from Ms. Lockwood-Stein was from the  
02:31:07 24 MRDC image scan stats summary dashboard in their Tableau  
02:31:15 25 system.

02:31:15 1 Q. And this slide also has highlighted the phrase "the  
02:31:19 2 commercial importance of auto capture technology." Could  
02:31:22 3 you explain for the jury what was your understanding of  
02:31:24 4 Ms. Lockwood-Stein's relationship to that topic?

02:31:26 5 A. Well, the notion here is the importance in reducing the  
02:31:32 6 error rates and the actual then performance of the system  
02:31:36 7 in fulfilling that objective is provided through this data.

02:31:39 8 Q. Do you have an understanding of whether or not  
02:31:42 9 Ms. Lockwood-Stein was officially designated by Wells Fargo  
02:31:46 10 to be its representative to provide the evidence on the  
02:31:52 11 topic of commercial importance of auto capture?

02:31:56 12 A. Yes. So my understanding of a corporate representative  
02:32:00 13 in a case like this is that Ms. Lockwood-Stein is not  
02:32:03 14 speaking on behalf of herself, she's speaking as though --  
02:32:07 15 on behalf of Wells Fargo as the entire corporation.

02:32:10 16 Q. And the snippet from Exhibit 26 that's on your slide,  
02:32:13 17 was that something that she actually provided on behalf of  
02:32:15 18 Wells Fargo at her deposition?

02:32:20 19 A. That's correct. My understanding is the data was  
02:32:22 20 provided as an exhibit during her depo.

02:32:24 21 Q. What are we looking at on the next slide?

02:32:27 22 A. Okay. So what we have now is just one month's -- well,  
02:32:31 23 just a snippet of the overall spreadsheet that was  
02:32:34 24 provided. And this was the -- you know, the verified data  
02:32:38 25 from -- officially from Wells Fargo that represented the

02:32:41 1 system.

02:32:42 2 And during her deposition, Ms. Lockwood-Stein  
02:32:46 3 explained a couple of these different modes, and I'll  
02:32:49 4 explain that to you, as well.

02:32:50 5 Q. Actually, before we get into walking through the  
02:32:53 6 categories, what was the complete time period of data that  
02:32:57 7 Ms. Lockwood-Stein provided on behalf of Wells Fargo?

02:33:00 8 A. So the data sheet upon which I built my analysis ran  
02:33:04 9 from 2017 through 2019. And in there, there were a couple  
02:33:12 10 of gaps. And so as I'll discuss in a few minutes, I had to  
02:33:19 11 do some compensation for that.

02:33:20 12 Q. Did Wells Fargo formally provide through that process  
02:33:22 13 any data for any other time frame beyond the 2017 to  
02:33:27 14 partial year 2019 spreadsheet?

02:33:30 15 A. No. This -- this was the official data provided by  
02:33:33 16 Ms. Lockwood-Stein as their corporate representative and  
02:33:37 17 verified the source as having come from their Tableau  
02:33:41 18 recordkeeping system.

02:33:41 19 Q. Could you explain for us what are the data categories  
02:33:45 20 that have been blown up on your slide?

02:33:48 21 A. Sure. And you're going to hear these terms used quite  
02:33:52 22 a bit, I think, over the next hour or two.

02:33:55 23 We have three different modes. If you look in  
02:33:57 24 that first green box, it's titled MiSnap Status. So within  
02:34:02 25 the MiSnap function that does auto capture, there are three

02:34:06 1 modes.

02:34:07 2           The first mode is video, and as Ms. Lockwood-Stein  
02:34:10 3 testifies above, video shows the acceptance rate for video,  
02:34:15 4 which is auto capture. So they're synonyms. Video mode is  
02:34:20 5 auto capture.

02:34:21 6 Q. And what are the still and manual modes?

02:34:24 7 A. So the MiSnap still mode and the MiSnap manual mode,  
02:34:31 8 both of these describe when the user holds the phone over  
02:34:34 9 the check and presses the button to take the picture. It's  
02:34:39 10 not the computer or the processor that determines when to  
02:34:41 11 take the picture. It's the human. And that's what we mean  
02:34:44 12 by manual or still.

02:34:45 13           And as you can see, if I may proceed, we've got  
02:34:47 14 the next green box is the image scan passed rate. In other  
02:34:53 15 words, how many passed? How many were good? And the  
02:34:57 16 video, you're seeing on this particular month of data for  
02:35:01 17 iOS, it was 88.8 percent. And you can see that the still  
02:35:05 18 and manual modes, still was right at 69.99 percent, and  
02:35:11 19 manual was 66.4 percent, but you can see they're roughly  
02:35:15 20 the same. Pretty equivalent.

02:35:17 21           And then the last column is the failed count, and  
02:35:20 22 that's just the inverse of the pass. You either pass or  
02:35:25 23 you fail. So 88.8 pass, 11.2 failed in the case of auto  
02:35:31 24 capture.

02:35:31 25 Q. So before we dig further into the numbers from the

02:35:35 1 spreadsheet, can you explain for us at a high level how do  
02:35:39 2 these modes you just described, auto capture and manual,  
02:35:42 3 actually look in the two parties, USAA and Wells Fargo's,  
02:35:48 4 applications?

02:35:48 5 MR. MELSHEIMER: Your Honor, may we approach?

02:35:50 6 THE COURT: Approach the bench.

02:35:56 7 (Bench conference.)

02:36:04 8 THE COURT: Yes, sir.

02:36:04 9 MR. MELSHEIMER: May it please the Court. I think  
02:36:05 10 we're getting into an inappropriate comparison of the two  
02:36:09 11 products.

02:36:11 12 MS. GLASSER: Well, it's not inappropriate, but if  
02:36:13 13 this is the time for the instruction, that makes perfect  
02:36:16 14 sense.

02:36:16 15 MR. MELSHEIMER: The issue here, of course, before  
02:36:18 16 the Court is not the comparison of the products but the  
02:36:21 17 comparison of the product to the patent, and this -- this  
02:36:23 18 would only serve to confuse the jury. It's inappropriate,  
02:36:28 19 it's prejudicial.

02:36:28 20 THE COURT: I'll give the instruction at this  
02:36:30 21 point that we discussed in chambers.

02:36:32 22 MS. GLASSER: Thank you, Your Honor.

02:36:33 23 MR. MELSHEIMER: Thank you.

02:36:34 24 (Bench conference concluded.)

02:36:40 25 THE COURT: Ladies and gentlemen of the jury, this



02:36:42 1 particular demonstrative slide and the testimony related to  
02:36:45 2 it should not be considered for the issue of infringement.  
02:36:49 3 It may be considered for other issues in the case.

02:36:52 4 Let's proceed.

02:36:54 5 MS. GLASSER: Thank you, Your Honor.

02:36:55 6 Q. (By Ms. Glasser) Sir, could you please explain what  
02:36:58 7 are we looking at here on this slide?

02:37:01 8 A. Sure. And if I may ask -- yes, thank you for moving  
02:37:06 9 that --

02:37:06 10 THE WITNESS: Thank you.

02:37:08 11 A. So what we have on this slide is the USAA  
02:37:11 12 Deposit@Mobile app on the left, and the Wells Fargo Mobile  
02:37:14 13 Deposit app on the right. And when the app begins  
02:37:20 14 capturing in auto -- or begins operation in auto capture  
02:37:24 15 mode, what you see are these live video frames, right?  
02:37:27 16 And -- and you can tell it's live video because as you move  
02:37:30 17 the phone around or you move the check around, you can see  
02:37:32 18 it responding on the view screen the same as it is in -- in  
02:37:36 19 real life. Sort of in a strikingly similar way between the  
02:37:40 20 two.

02:37:40 21 You'll also notice on the Wells Fargo side, in the  
02:37:44 22 lower right corner is this little picture of a camera. And  
02:37:48 23 that's the actual manual button. So that if the user wants  
02:37:52 24 to, when they're holding the phone, they can tap their  
02:37:55 25 finger on that little icon of the camera there, and that's

02:37:58 1 how they take a manual picture.

02:38:01 2 Q. In the Wells Fargo application, do you have information  
02:38:05 3 on approximately how often a user actually chooses to use  
02:38:11 4 the manual capture?

02:38:12 5 A. The -- the data shows that the successful deposits --  
02:38:18 6 94 or 95 percent of the successful deposits come from auto  
02:38:22 7 capture, and only 5 percent or so come from manual capture.

02:38:30 8 Q. What are we looking at here?

02:38:32 9 A. So I just put a couple of items on these lists of  
02:38:37 10 real-time analysis of video frames for image quality. It's  
02:38:43 11 quite obvious from just a user's perspective that, for  
02:38:47 12 instance, on positioning, if you're too far away from the  
02:38:50 13 check, the app will pop up a little message that says, get  
02:38:55 14 closer. And as you get closer, it takes the picture.

02:38:58 15 Q. What does that tell you? What's the significance of  
02:39:01 16 that when you're observing that as -- as a user?

02:39:03 17 A. Well, so I note at the bottom, it's understandable just  
02:39:06 18 from the use of the system that if a frame is not  
02:39:08 19 acceptable, if it's not good, it's not going to capture.  
02:39:11 20 It's discarded and it keeps gathering frames and giving you  
02:39:17 21 feedback until it can get a good image.

02:39:20 22 Q. Actually let's pause your presentation for a moment.

02:39:23 23 MS. GLASSER: Could we call up Slide 99 from  
02:39:27 24 Dr. Conte's presentation?

02:39:43 25 Q. (By Ms. Glasser) You were here for Dr. Conte's

02:39:46 1 examination?

02:39:46 2 A. The vast majority of it, yes.

02:39:49 3 Q. And there was some discussion during his presentation  
02:39:56 4 about the various considerations that a machine may look to  
02:40:01 5 or -- to determine whether a check is sufficient. Do you  
02:40:05 6 recall that?

02:40:05 7 A. Those -- the list of monitoring criteria, yes.

02:40:30 8 MS. GLASSER: I'm sorry, Slide 99, please. Thank  
02:40:35 9 you very much, Mr. Huynh.

02:40:36 10 Q. (By Ms. Glasser) Were you here in court when this  
02:40:40 11 particular slide was shown on the cross-examination?

02:40:43 12 A. I was.

02:40:44 13 Q. And I wanted to ask you about the types of items on  
02:40:47 14 this slide, the monitoring criterion.

02:40:51 15 First of all, to remind the jury at a high level,  
02:40:54 16 where do the monitoring criterion come in, in the auto  
02:40:59 17 capture method?

02:41:00 18 A. So as -- as you've heard, as those frames are flipping  
02:41:04 19 by, 30 frames per second or thereabouts, the processor is  
02:41:08 20 doing all these different comparisons of the quality of the  
02:41:11 21 image it sees in front of itself with what it knows are the  
02:41:14 22 important criteria for making sure that check could be read  
02:41:18 23 by other computers and successfully processed as a deposit  
02:41:21 24 down the road.

02:41:22 25 Q. And now when you as a banking executive back in the

02:41:28 1 days before auto capture were thinking about those types of  
02:41:31 2 things, were they ever happening on the user's device?

02:41:34 3 A. Well, no. This was the break-through that USAA had.

02:41:38 4 Q. So where did they happen in the time before we had this  
02:41:43 5 invention?

02:41:45 6 A. For all the years from the first image -- introduction  
02:41:48 7 of image in the 1990s in check processing, or even '80s,  
02:41:53 8 maybe, until USAA invented mobile remote deposit capture,  
02:41:59 9 this was always done either on a server or on specialized  
02:42:03 10 equipment --

02:42:03 11 MR. MELSHEIMER: Your Honor, Your Honor,  
02:42:05 12 objection. May we approach?

02:42:06 13 THE COURT: Approach the bench.

02:42:08 14 (Bench conference.)

02:42:18 15 THE COURT: Yes, sir.

02:42:18 16 MR. MELSHEIMER: So, Your Honor, this is the issue  
02:42:19 17 we've raised before about other patents. He just said they  
02:42:23 18 invented mobile remote deposit capture.

02:42:27 19 MS. GLASSER: Oh, I can ask him to --

02:42:29 20 MR. MELSHEIMER: And that is not -- I'm sorry --

02:42:30 21 THE COURT: Let's finish and let's talk one at a  
02:42:32 22 time.

02:42:33 23 MR. MELSHEIMER: I'm sorry.

02:42:34 24 So I think it is inappropriate. It was the  
02:42:37 25 subject of a motion in limine excluding other patents and

02:42:39 1 things of that nature. And I just object to it and ask  
02:42:42 2 that there be an instruction or a correction offered on the  
02:42:45 3 record.

02:42:46 4 THE COURT: What's the Plaintiff's response?

02:42:47 5 MS. GLASSER: So he's talking about the  
02:42:49 6 patents-in-suit. I think it's clear. I can get him to  
02:42:52 7 clarify. But this is --

02:42:53 8 THE COURT: As long as he clarifies these are the  
02:42:57 9 patents-in-suit, then I'll overrule the objection.

02:43:00 10 MS. GLASSER: Yes, Your Honor. Thank you.

02:43:01 11 THE COURT: And you can certainly reraise it if  
02:43:03 12 you think they get into the unasserted patents. But we're  
02:43:05 13 going to get it straight. He's either talking about the  
02:43:08 14 patents-in-suit, or he needs to not talk about unasserted  
02:43:12 15 patents.

02:43:12 16 MS. GLASSER: Yes, sir, yes, sir. Thank you, Your  
02:43:14 17 Honor.

02:43:14 18 (Bench conference concluded.)

02:43:18 19 THE COURT: Let's proceed.

02:43:20 20 Q. (By Ms. Glasser) Sir, a point of clarification, when  
02:43:22 21 you said before USAA invented mobile deposit, or words to  
02:43:28 22 that effect, you were talking about the invention of auto  
02:43:31 23 capture described in the patents-in-suit; is that right?

02:43:32 24 A. Yes, ma'am.

02:43:34 25 Q. Okay. With that clarification, could you continue your

02:43:37 1 response describing to us how this was done previously?

02:43:41 2 A. Sure. So at Bank of America and throughout the  
02:43:46 3 industry, conventional thinking was that image quality  
02:43:49 4 analysis was done on an image quality analysis server or  
02:43:54 5 within this specialized industrial equipment I mentioned  
02:43:57 6 earlier. The notion of doing it on a smartphone actually  
02:44:01 7 was disbelieved at the time and was the motivation for  
02:44:06 8 prototyping to show that it actually could be done.

02:44:14 9 MS. GLASSER: If we could have Mr. Calman's  
02:44:16 10 presentation back, please.

02:44:18 11 Q. (By Ms. Glasser) All right. So in the USAA system, in  
02:44:34 12 the Wells Fargo system, what happens if when those previews  
02:44:39 13 are going by quickly, what happens if a frame does not meet  
02:44:45 14 the required criteria?

02:44:48 15 A. So this is another element that you've heard about in  
02:44:51 16 the USAA and the Wells Fargo system that -- that if it  
02:44:55 17 doesn't meet criteria, that feedback is given to the user  
02:44:59 18 to help them understand what needs to be done to create a  
02:45:03 19 better image. To -- to allow the system to do its auto  
02:45:11 20 capture.

02:45:12 21 Q. All right. So, ultimately, whether this proceeds  
02:45:15 22 through the auto capture process or whether the user either  
02:45:20 23 proceeds in that still mode or that manual mode, what  
02:45:24 24 happens at the end?

02:45:25 25 A. So at the end, what you have is what I call the deposit

02:45:30 1 input form. It has a couple of different names. But  
02:45:33 2 essentially what you have are these little tiny -- they're  
02:45:36 3 called thumbnail images, so it's sort of miniature pictures  
02:45:40 4 of the check and the amount that the -- the user keyed in.  
02:45:43 5 It's a, you know, \$20.00 deposit, what have you, and the  
02:45:46 6 checking account to which -- or the account to which I'm  
02:45:49 7 depositing.

02:45:50 8           Only once those are all satisfied, does the  
02:45:54 9 deposit button sort of light up and become active. So if  
02:45:57 10 you haven't gotten two good images and you haven't entered  
02:46:02 11 your account and entered the amount, that button is grayed  
02:46:06 12 out. And no matter how hard you push it, it's not going to  
02:46:09 13 work.

02:46:10 14           Both apps in the same way when those information  
02:46:12 15 pieces are assembled and ready, only then does the deposit  
02:46:14 16 button light up and the user pushes that button and that's  
02:46:17 17 the actual submission to the bank.

02:46:20 18 Q. Okay. Going back to your analysis of the data, were  
02:46:23 19 you able to analyze the complete data set provided by Wells  
02:46:29 20 Fargo to determine on average whether there is a difference  
02:46:33 21 between the failure rate through auto capture versus the  
02:46:36 22 failure rate if someone is choosing the manual option?

02:46:40 23 A. So I was able to use the official verified data from  
02:46:44 24 Ms. Lockwood-Stein to compute the difference in performance  
02:46:48 25 over that time frame, over that -- almost three-year time

02:46:52 1 frame between the manual capture mode at Wells Fargo and  
02:46:54 2 the auto capture mode.

02:46:56 3 And what we see on the left is that -- some  
02:47:00 4 slightly different values for manual and still, 32.45 for  
02:47:05 5 manual, 28.59 for -- for still. But together about an  
02:47:11 6 average failure rate for manual modes of 30.52 percent, and  
02:47:17 7 that compares to an auto capture average failure rate of  
02:47:20 8 10.38 percent.

02:47:22 9 That's a decrease of two-thirds, and it explains  
02:47:31 10 why auto capture is a must-have feature. If I may, think  
02:47:35 11 back to those hundred users. Out of a hundred users using  
02:47:38 12 manual capture, 30 percent were having problems. Auto  
02:47:41 13 capture, only 10 people or so, a little more, out of a  
02:47:44 14 hundred were having the same kind of problems. And so it's  
02:47:47 15 a two-thirds decrease in rate of failure.

02:47:54 16 Q. All right. After you -- I'm sorry, is it possible for  
02:48:02 17 you to clear that? There's some purple on the screen.

02:48:06 18 A. I've been watching the Judge. Let's see if I can do  
02:48:10 19 it.

02:48:10 20 Q. Perfect, thank you.

02:48:10 21 THE COURT: You can also do it from the podium,  
02:48:14 22 counsel.

02:48:14 23 MS. GLASSER: Oh.

02:48:14 24 THE COURT: Let's proceed.

02:48:15 25 MS. GLASSER: I should be doing it, thank you,



02:48:16 1 Your Honor.

02:48:16 2 Q. (By Ms. Glasser) After you did the calculation of  
02:48:18 3 failure rate reduction, what was the next aspect of your  
02:48:22 4 analysis?

02:48:22 5 A. So no single operational measure like that failure rate  
02:48:30 6 can tell you the whole story. In order to understand and  
02:48:33 7 do this apportionment analysis, you need to understand more  
02:48:37 8 about the customer's experience over time with an app. You  
02:48:41 9 know, you can't just look at one single value to tell you  
02:48:44 10 the answer to the question.

02:48:46 11 And so my next step was to look at the customer  
02:48:51 12 experience over a 30-, 60-, and 90-day time frame.

02:48:55 13 Q. Okay. So walk us through that. You initially  
02:48:58 14 highlighted the failure rate data. Now, what did you do  
02:49:01 15 next with that data?

02:49:02 16 A. Right. So on this slide, it's -- it's really just a  
02:49:05 17 summary of what I've just talked through. Remember, USAA's  
02:49:09 18 failure rate showed that before and after of a 41 percent  
02:49:14 19 improvement.

02:49:14 20 I just talked through Wells Fargo's experience.  
02:49:17 21 The difference between their system's performance for auto  
02:49:22 22 capture and manual capture, a 66 percent improvement.

02:49:27 23 But as I said, that doesn't tell the whole story.  
02:49:30 24 We need to look at more stuff.

02:49:31 25 And so I used some statistical analysis and a

02:49:34 1 computation called yield analysis, I'll talk about, to try  
02:49:39 2 and understand, okay, what's it like for an actual person  
02:49:42 3 using this app over a one, two, and three-month period of  
02:49:46 4 time.

02:49:47 5 Q. From a banking operations standpoint, why is it  
02:49:52 6 important to look at that one, two, or three-month  
02:49:55 7 experience rather than just a single point in time?

02:49:57 8 A. Oh, sure. It's -- so every day is different at a bank.  
02:50:02 9 It -- it -- whether it's a day of a week or it's payday or  
02:50:06 10 there was a three-day weekend or even weather, bad weather  
02:50:11 11 can affect whether people are going to the branch or not,  
02:50:13 12 every day of transactions are different.

02:50:15 13 And so it's just not right to look at one or two  
02:50:19 14 or three days. You have to look at the performance of a  
02:50:21 15 system over one month or multiple months because people's  
02:50:24 16 business cycles and personal transactions just vary so  
02:50:27 17 much.

02:50:28 18 Q. So what data did you use to perform this error free  
02:50:36 19 one, two, three-month analysis?

02:50:36 20 A. So I went back to the official verified data from  
02:50:39 21 Ms. Lockwood-Stein. And as I mentioned a few moments ago,  
02:50:42 22 there were a couple of gaps in that data. It just wasn't a  
02:50:46 23 perfect datastream. I understand there were some changes  
02:50:49 24 in their recordkeeping methods through that time.

02:50:51 25 So what I was able to do was to find a span of 10

02:50:55 1 months from January of '18 through October of 2018 where  
02:50:59 2 the data was clean. It was good, and I could use it.

02:51:04 3 Q. Can you describe for us, sir, what did you do with that  
02:51:08 4 data?

02:51:08 5 A. Okay. So the data told us that, on average, Wells  
02:51:13 6 Fargo customers make about two deposits with MRDC per  
02:51:17 7 month. That's two checks, right? And each check -- in  
02:51:22 8 order to deposit a check, you've got to do the front and  
02:51:25 9 the back, so there's two scans for every deposit.

02:51:28 10 Using the performance numbers as error free  
02:51:32 11 numbers that we looked at a moment ago, when you compute  
02:51:35 12 that across for just about two deposits per month and two  
02:51:39 13 sides per check, what you find is that over the course of a  
02:51:44 14 30-day period or a one-month period, auto capture provides  
02:51:48 15 61.17 percent of customers with an error free experience,  
02:51:52 16 all's good, all's clean.

02:51:55 17 Whereas, manual capture customers -- those  
02:51:58 18 customers who choose to push the button themselves, only  
02:52:01 19 about 21.5 -- well, exactly 21.55 percent of the customers  
02:52:07 20 get an error free experience. And what that means is, on a  
02:52:10 21 one-month basis, auto capture gives 2.84 times better  
02:52:18 22 experience to customers in giving them error free  
02:52:21 23 operation.

02:52:21 24 Q. Well, what happens when you extend that analysis out to  
02:52:24 25 the two-month time frame?

02:52:26 1 A. Sure. So two months now, it's two deposits per month.  
02:52:30 2 Now, it's two months, four deposits, two sides per, and you  
02:52:35 3 start to see the power of compounding here, right?

02:52:38 4 So now, over a two-month basis, 37.62 percent of  
02:52:44 5 those auto capture using customers, they're getting error  
02:52:47 6 free experience. All smooth, no problems.

02:52:50 7 Now, only 4.36 percent of the people who choose to  
02:52:53 8 do manual capture are getting no errors, and that's 8.63  
02:52:59 9 times better for auto capture as compared to manual.

02:53:01 10 Q. Briefly summarize for us what happens when you extend  
02:53:05 11 it out to three months?

02:53:07 12 A. Now, at this point, 90 days, as you imagine, 22.75  
02:53:12 13 percent of auto capture, almost a quarter of the auto  
02:53:14 14 capture customers, are still getting error free performance  
02:53:17 15 over a full three-month period.

02:53:19 16 Not even 1 percent of manual capture customers  
02:53:22 17 have been error free, meaning almost everybody -- 99 out of  
02:53:26 18 a hundred customers using manual customer have had some  
02:53:29 19 sort of error. And that's more than 25 times better using  
02:53:33 20 auto capture than using manual capture.

02:53:35 21 Q. Now, when you describe customers going a month or two  
02:53:39 22 months or three months with no errors, what types of errors  
02:53:43 23 are we talking about?

02:53:44 24 A. So it depends. For some, in some cases, it's just a  
02:53:49 25 matter of a couple of seconds, I need to take another set

02:53:53 1 of pictures, front and back, and things go through.

02:53:55 2           On the other hand, it may mean that that customer  
02:53:58 3 just can't get their check deposited. They can't get --  
02:54:00 4 they can't make it happen with their phone, and they've got  
02:54:02 5 to find another way to get that deposit made. And that's a  
02:54:05 6 problem for the customer, and that's a problem for the  
02:54:08 7 bank, too.

02:54:08 8 Q. Why is it a problem for the bank?

02:54:10 9 A. Well, the bank -- they have a lot of expense in dealing  
02:54:15 10 with these errors and in creating -- in sort of the  
02:54:21 11 resolution processes when there's -- some of the types of  
02:54:24 12 errors we're talking about.

02:54:25 13 Q. Now, how did you go about translating all of this  
02:54:30 14 analytical work that you've done into an apportionment of  
02:54:33 15 value?

02:54:33 16 A. So using the data that we've just accumulated, what we  
02:54:39 17 can do is figure out what proportion of those error free  
02:54:43 18 experiences are thanks to auto capture.

02:54:46 19           So, again, out of a hundred folk, on average, 79  
02:54:52 20 percent or 79 people out of a hundred who've had an error  
02:54:56 21 free experience, well, they have auto capture to thank for  
02:54:58 22 that. That's what auto capture does in terms of creating  
02:55:02 23 error free experiences.

02:55:04 24           But, you know, like I said earlier, no single  
02:55:07 25 number can tell the whole story. Even a basketful of

02:55:13 1 numbers can't always tell you the full story. There's  
02:55:16 2 always other factors that go into creating a -- a -- the  
02:55:19 3 difference between a model and real life, right? There's  
02:55:22 4 things you just don't know.

02:55:23 5 As I mentioned, it could be the geography, how  
02:55:26 6 close am I to an ATM or a branch if I have to go there  
02:55:31 7 instead? You know, is it month end? Do I really need this  
02:55:34 8 money in this deposit? Will I keep trying because I really  
02:55:35 9 need the money, or is it just a, you know, \$2.00 check from  
02:55:38 10 my nephew. It -- it all depends.

02:55:40 11 And because the model can't capture all those  
02:55:43 12 things, it's very typical in my experience that you -- you  
02:55:47 13 have the results of your model to account for all of those  
02:55:52 14 unknowns.

02:55:52 15 So instead of the 79 percent, I took half and went  
02:55:57 16 with a 40 percent apportionment factor because we just  
02:56:01 17 don't know enough to be able to say for sure it's 79  
02:56:05 18 percent.

02:56:05 19 Q. How frequently in the banking industry have you seen  
02:56:08 20 this approach employed of accounting for the unknowns by  
02:56:13 21 conservatively reducing a projection by half?

02:56:17 22 A. So I had nearly three decades in the banking business  
02:56:21 23 doing operational forecasting and modelling and  
02:56:24 24 understanding these kinds of things. I used it for years.  
02:56:27 25 It was a common practice. And we even saw that Wells Fargo

02:56:32 1 used the same approach.

02:56:34 2 Q. In addition to the calculations that you've presented  
02:56:37 3 to the jury so far, did you identify any other insights  
02:56:42 4 regarding the value to be properly apportioned to the  
02:56:45 5 patented auto capture technology?

02:56:46 6 A. So as I've said, no one answer or no one model can tell  
02:56:52 7 you all the answers. So I took another angle at this  
02:56:57 8 question, and I looked at the impact of leadership --  
02:57:00 9 mobile leadership on the growth of Wells Fargo's system and  
02:57:04 10 how fast it grew.

02:57:06 11 And what I adopted was a well-known piece of  
02:57:10 12 research and product in the industry called the Net  
02:57:16 13 Promoter System.

02:57:16 14 Now, you may be familiar with Net Promoter System.  
02:57:18 15 If you've ever gotten a survey that says, on a scale from 1  
02:57:22 16 to 10, how likely are you to recommend our service to a  
02:57:24 17 friend? If you've ever seen a survey question like that,  
02:57:29 18 that's Net Promoter System. That's Net Promoter Score.  
02:57:33 19 It's all about that one question.

02:57:35 20 So what Bain did is they looked across multiple  
02:57:39 21 industries over a long period of time to understand the  
02:57:42 22 impact of Net Promoter scores on growth. And their insight  
02:57:49 23 is that leaders in customer experience, companies with high  
02:57:54 24 Net Promoter scores where lots of people would recommend  
02:57:57 25 their service to a friend, experience more than two times

02:58:01 1 the growth factor -- the growth rate as their average  
02:58:03 2 competitors.

02:58:06 3 Q. So how does this insight from the Bain research -- the  
02:58:12 4 Bain study, how does that provide you with insight into the  
02:58:19 5 portion of value attributable to auto capture?

02:58:21 6 A. So Bain teaches us that leaders in this Net Promoter  
02:58:25 7 Score can expect more than two times growth over time as  
02:58:28 8 compared to their competitors.

02:58:31 9 We knew by 27 -- 2017 -- and the Futurion report  
02:58:35 10 backs this up -- that auto capture was a must-have feature.  
02:58:40 11 It was necessary to be a leader. And we've highlighted --  
02:58:42 12 I've highlighted a line on the top that notes that Chase  
02:58:46 13 Bank -- Chase Bank slipped from the top 10 because they  
02:58:50 14 only had manual capture. They couldn't maintain a  
02:58:54 15 leadership position without auto capture.

02:58:56 16 And so when I put those two together, it helped me  
02:59:01 17 to reforecast, well, what if -- what if Wells Fargo had not  
02:59:04 18 launched auto capture and only had a manual capture  
02:59:07 19 solution like Chase Bank? And what I was able to do was  
02:59:12 20 mathematically demonstrate with a model that 42 percent of  
02:59:16 21 the growth that Wells Fargo had with their mobile remote  
02:59:19 22 deposit capture system was thanks to auto capture.

02:59:25 23 Q. Now, earlier, you mentioned that you used the data from  
02:59:28 24 Wells Fargo's corporate representative that was supplied as  
02:59:31 25 part of the litigation process; is that right?



02:59:33 1 A. Yes, ma'am.

02:59:34 2 Q. After you submitted your expert report in this matter,  
02:59:38 3 did you see further information provided later by Wells  
02:59:45 4 Fargo through one of its experts regarding failure data?

02:59:49 5 A. I did. This spreadsheet was referenced in  
02:59:54 6 Dr. Villasenor's report. This is the iOS sheet. This is  
02:59:59 7 the entirety of the data for iOS. There was another  
03:00:02 8 similar looking table for Android, but this is it.

03:00:06 9 And -- and what it contains are a couple of days  
03:00:12 10 of data. So you see at the top we've got May the 8th, and  
03:00:15 11 we've got September the 5th, and we've got that data from  
03:00:19 12 that day, May the 8th, and we've got a -- a data point from  
03:00:25 13 September the 5th.

03:00:27 14 Q. And you mentioned, I think, that this was all of the  
03:00:31 15 data, apart from a similar spreadsheet on Android. Are we  
03:00:36 16 literally looking on this screen at all of the iOS data  
03:00:39 17 that was identified by Dr. Villasenor for this point?

03:00:42 18 A. That's right. This is what I call point data or  
03:00:45 19 point-in-time data. This is not a series of days or months  
03:00:49 20 or years worth of data. This is just a snapshot of a  
03:00:54 21 particular day before a change and a particular day, it  
03:00:57 22 says here, after a MiSnap update. So that's all it is.

03:01:01 23 Q. In your experience in banking industry operations, is  
03:01:05 24 single-day data helpful in performing analysis?

03:01:11 25 A. Well, no. As I mentioned before, this is just not how

03:01:15 1 it's done. You -- you don't know what day -- well, we know  
03:01:17 2 what day of the week it was. We don't know what the  
03:01:19 3 weather was that day. We don't know was -- were there  
03:01:22 4 paydays around there? Was there -- were there other -- we  
03:01:26 5 don't -- it's just a single day.

03:01:28 6 And because people's business cycles and  
03:01:30 7 business's business cycles are all different, everybody's  
03:01:33 8 different, we always, always look at 30, 60, 90, and even  
03:01:38 9 longer time frames so we can smooth out all of those  
03:01:41 10 differences between those days. It's just not right to  
03:01:44 11 pick one day and compare it to one other day. It just  
03:01:48 12 doesn't give you a valuable insight.

03:01:49 13 Q. Understanding that your views on the data is that it's  
03:01:53 14 not particularly helpful, did you nonetheless in an  
03:01:56 15 abundance of caution construct a new model using the data  
03:02:01 16 supplied by Mr. Villasenor?

03:02:04 17 A. I did. Excuse me for the eyedrops. I did.

03:02:07 18 Q. And actually, I misspoke for a moment. This is Wells  
03:02:10 19 Fargo data that was attached to Mr. Villasenor's report,  
03:02:14 20 correct?

03:02:14 21 A. Yes, ma'am.

03:02:14 22 Q. And you did go ahead and run a model to see what it  
03:02:19 23 would produce if you used this point in time, correct?

03:02:22 24 A. I did. And, as I said, this is not the official  
03:02:25 25 verified data from Wells Fargo, nor do I agree that it's

03:02:29 1 appropriate to use this data for modelling. Nevertheless,  
03:02:34 2 I plugged that data into the exact same model that I showed  
03:02:37 3 you earlier.

03:02:39 4 And using the May 8th manual capture rate data and  
03:02:43 5 the Wells Fargo expectation for auto capture, 90 percent --  
03:02:47 6 you recall they were expecting a 90 percent rate. And, in  
03:02:51 7 fact, they did get 90 percent rate. That was what they --  
03:02:54 8 their operational system was doing.

03:02:56 9 When I use this single point-in-time data, it just  
03:02:58 10 still further confirms that auto capture at this point in  
03:03:03 11 time was 1.7 times -- 78 times better at producing error  
03:03:08 12 free customer experience.

03:03:09 13 Q. Sir, taking together all of the different points of  
03:03:17 14 analysis that you performed and described in your report,  
03:03:19 15 what is your ultimate conclusion on how we quantify the  
03:03:23 16 value of the auto capture patents?

03:03:25 17 A. Right. So to recap, we looked at error performance  
03:03:29 18 data, we looked at customer experience data, we looked at  
03:03:31 19 the Bain insights, we even confirmed it with this  
03:03:37 20 extraneous supplemental data. Everything comes down to my  
03:03:42 21 opinion that at least 40 percent of the value of mobile  
03:03:48 22 deposit is attributable to auto capture.

03:03:52 23 Q. Thank you very much, sir.

03:03:54 24 MS. GLASSER: I pass the witness.

03:03:55 25 THE COURT: Counsel, approach the bench, please.

03:03:56 1 (Bench conference.)

03:04:04 2 THE COURT: I'm going to give the jury a short  
03:04:08 3 recess at this point. You all take a couple minutes to  
03:04:14 4 compare notes, and then let my law clerks know where we  
03:04:19 5 stand on those disputes that we talked about this morning  
03:04:22 6 that I carried. Okay?

03:04:23 7 MR. MELSHEIMER: Your Honor, we're probably going  
03:04:24 8 to want to bring up an issue that's been raised by  
03:04:27 9 Mr. Calman's testimony regarding some of these issues that  
03:04:29 10 we've talked about at other banks and whether or not the  
03:04:34 11 other banks used auto capture or manual capture, and we're  
03:04:38 12 just going to want a minute to talk about that before we go  
03:04:41 13 into cross-examination.

03:04:43 14 MS. GLASSER: We had understood that was resolved  
03:04:44 15 this morning; that you agreed you are not going to do that.

03:04:48 16 THE COURT: You all talk, and I'll see you before  
03:04:52 17 I bring the jury back in.

03:04:54 18 MR. MELSHEIMER: Thank you, Your Honor.

03:04:57 19 (Bench conference concluded.)

03:04:57 20 THE COURT: Ladies and gentlemen of the jury,  
03:04:59 21 before the Defendant cross-examines Mr. Calman, we're going  
03:05:03 22 to take a short recess.

03:05:05 23 You may simply leave your notebooks closed and in  
03:05:08 24 your chairs. Please follow all the instructions I have  
03:05:11 25 given you about your conduct during the trial, including,

03:05:14 1 of course, not to discuss the case among yourselves and  
03:05:15 2 we'll have you back in here shortly to continue. The jury  
03:05:23 3 is dismissed for recess.

03:05:26 4 COURT SECURITY OFFICER: All rise.

03:05:47 5 (Jury out.)

03:05:47 6 THE COURT: Counsel, take 10 minutes to consult  
03:05:52 7 with each other about those issues that were left open from  
03:05:55 8 our meeting this morning in chambers, and then see me in  
03:05:57 9 chambers. Court stands in recess.

03:06:02 10 COURT SECURITY OFFICER: All rise.

03:06:03 11 (Recess.)

03:41:10 12 (Jury out.)

03:41:11 13 COURT SECURITY OFFICER: All rise.

03:41:13 14 THE COURT: Be seated, please.

03:41:13 15 All right. Are you prepared to undertake  
03:41:19 16 cross-examination, Mr. Melsheimer?

03:41:21 17 MS. GLASSER: Your Honor, we have something to  
03:41:23 18 address at sidebar, if we could, before we begin.

03:41:27 19 THE COURT: All right. Tell me what that is.

03:41:28 20 MS. GLASSER: It has to do with the discussion in  
03:41:31 21 chambers about the document to potentially be used during  
03:41:33 22 the cross-examination. We now have a copy of it.

03:41:37 23 THE COURT: All right.

03:41:40 24 MS. GLASSER: May we approach, or should we do it  
03:41:42 25 in open court? I'm concerned about doing it in front of

03:41:46 1 the witness.

03:41:46 2 THE COURT: Approach the bench.

03:41:47 3 (Bench conference.)

03:41:57 4 MS. GLASSER: So we have the document now. It's

03:42:00 5 not actually a statement of the witness at all. This

03:42:03 6 witness never worked at Merrill Lynch. The witness is

03:42:07 7 saying he got this from somebody named Pete Buchhop.

03:42:13 8 THE COURT: I thought I asked you in chambers,

03:42:15 9 Mr. Melsheimer, if this was a direct statement of the

03:42:17 10 witness.

03:42:17 11 MR. MELSHEIMER: It is his statement in his

03:42:21 12 report, Your Honor, that he prepared for RPX. That is the

03:42:24 13 statement that he writes in his report and his findings. I

03:42:27 14 don't know --

03:42:27 15 THE COURT: He included a statement from someone

03:42:29 16 else in his report is effectively what this looks like.

03:42:34 17 MR. MELSHEIMER: I'm not sure if that's right or

03:42:35 18 not, Your Honor. Actually -- but I'm happy to -- he wrote

03:42:44 19 that in his report. Now, whether he'd say he didn't

03:42:47 20 believe it or someone else told him that, but that -- this

03:42:50 21 is his report that he authored.

03:42:55 22 MS. GLASSER: And I think the report is a

03:42:57 23 significant overstatement. Now that we've seen it, it's

03:43:02 24 kind of his initial findings of a couple of areas of things

03:43:03 25 that could be done and things that he looked at.

03:43:06 1 And here he said he had an initial phone call of  
03:43:09 2 this person. There were a few more pages to it, too.

03:43:23 3 MR. MELSHEIMER: I mean, he could say, you know, I  
03:43:25 4 didn't -- I didn't believe that, but that's what this guy  
03:43:28 5 told me. I don't have -- I've never asked him about it,  
03:43:30 6 Judge, so I don't know one way or the other. But that is  
03:43:33 7 the statement that --

03:43:34 8 THE COURT: I see it. I see it. It's under  
03:43:37 9 heading marked expert conversations for discussion with RPX  
03:43:42 10 prior to contact.

03:43:43 11 Then it references Pete Buchhop, STA Group, former  
03:43:53 12 colleague, tech fellow at Bank of America Merrill Lynch.

03:44:00 13 Then below it, without any attribution, it says,  
03:44:00 14 principal developer of Merrill Lynch app first mobile  
03:44:03 15 deposit app to automatically take a photo of a check for  
03:44:09 16 image check deposit.

03:44:09 17 It's unclear that that is -- it appears, but it's  
03:44:12 18 unclear that that's Mr. Buchhop's statement, and that  
03:44:17 19 Mr. Calman included it in this report.

03:44:19 20 It could be Mr. Calman's characterization of his  
03:44:23 21 conversation with Mr. Buchhop. I don't know. But it is  
03:44:27 22 far from a direct statement clearly attributable to the  
03:44:31 23 witness that is inconsistent with his testimony.

03:44:35 24 MR. MELSHEIMER: Well, Your Honor, can I just say  
03:44:38 25 it is attributable to the witness. He wrote it. He put it

03:44:41 1 together. Now, it may be that he's got some layers of  
03:44:44 2 hearsay about it. But it is absolutely attributable to  
03:44:47 3 him. He put it in the report.

03:44:49 4 MS. GLASSER: Also, it's not at all impeaching  
03:44:51 5 because the testimony that he was trying to impeach was  
03:44:54 6 that -- was that USAA was the pioneer in this industry.  
03:44:59 7 USAA developed the first product back in 2006. This  
03:45:04 8 patent, of course, was conceived 2008. So this doesn't  
03:45:11 9 contradict this at all if he's saying --

03:45:14 10 THE COURT: Please don't touch those.

03:45:15 11 MS. GLASSER: Sorry, Your Honor.

03:45:16 12 THE COURT: That's fine. They just cause pain in  
03:45:18 13 the ears of the court reporter.

03:45:20 14 MS. GLASSER: Okay. We don't want that. So,  
03:45:22 15 anyway, the bigger point is it's not his own statement, but  
03:45:26 16 I don't think it would be impeaching, in any event.

03:45:28 17 MR. MELSHEIMER: I think it goes to the weight of  
03:45:30 18 the impeachment, Your Honor, the way they would explain it.  
03:45:32 19 I don't think it goes to the -- including the notion that  
03:45:36 20 he was repeating something someone else told him. It's not  
03:45:39 21 apparent from the face of the document that that's true. I  
03:45:41 22 don't know that that's true. But --

03:45:44 23 MS. GLASSER: The only way for him to try to  
03:45:47 24 explain it is to go down this path of what was this  
03:45:50 25 analysis he was doing for RPX -- this is actually clearly a



03:45:56 1 privilege document.

03:45:57 2           Maybe RPX decided to waive the privilege for  
03:46:00 3 Mr. Melsheimer, but he's going to feel very, very  
03:46:02 4 uncomfortable what it is he can talk about about that  
03:46:05 5 analysis and what he can't. He undoubtedly has an  
03:46:09 6 agreement with RPX or their counsel regarding whatever this  
03:46:12 7 work was that he did.

03:46:13 8           THE COURT: How did this come to be in your hands,  
03:46:16 9 Mr. Melsheimer?

03:46:16 10           MR. MELSHEIMER: Your Honor, I'm not -- I  
03:46:17 11 personally do not know. I believe we got it through  
03:46:22 12 someone at -- someone at Wells Fargo that had some  
03:46:26 13 connection with RPX. I honestly -- I don't want to give an  
03:46:29 14 answer without having --

03:46:30 15           THE COURT: I'm just asking what you know.

03:46:32 16           MR. MELSHEIMER: I know we -- we have this in the  
03:46:35 17 research we did about Mr. Calman. I just -- I don't know  
03:46:38 18 who provided us this document.

03:46:40 19           MS. GLASSER: And Mr. Calman has -- they  
03:46:43 20 represented Mr. Calman at one point in time. So that's a  
03:46:48 21 whole other layer of this. Mr. Melsheimer, I think, put  
03:46:52 22 him on at trial at one point or deposition. So it's going  
03:46:54 23 to be a whole web of confidential privileged information  
03:46:57 24 that is not at all related to any issue in this case.

03:47:01 25           MR. MELSHEIMER: Your Honor, I never represented

03:47:03 1 Mr. Calman.

03:47:04 2 THE COURT: I'm not -- I'm not going to get into  
03:47:06 3 any potential conflicts or breaches of confidentiality  
03:47:10 4 agreements. Those are between you all and whoever you may  
03:47:13 5 have made those confidential commitments to.

03:47:21 6 MR. MELSHEIMER: Well, I haven't made any, Your  
03:47:21 7 Honor --

03:47:22 8 THE COURT: I'm just not going to get into that.  
03:47:26 9 In my mind, is this an appropriate document for  
03:47:30 10 impeachment?

03:47:30 11 Mr. Melsheimer, I'm going to allow you to ask the  
03:47:32 12 witness if he's familiar with this report and did he  
03:47:37 13 include this statement in the report.

03:47:42 14 Now, he could say, that was not my statement.  
03:47:44 15 That was somebody else's. I put it in there for the  
03:47:47 16 benefit of the client. But you are only going to use this  
03:47:50 17 one line that you've underlined here.

03:47:51 18 MR. MELSHEIMER: That's right. Your Honor, when  
03:47:54 19 you said I can preface it by saying, you told the jury  
03:48:00 20 earlier, that's the whole impeachment aspect of it.

03:48:02 21 THE COURT: You can reference what he told the  
03:48:04 22 jury earlier.

03:48:05 23 MR. MELSHEIMER: Yes, sir.

03:48:06 24 THE COURT: And then you can ask him about this,  
03:48:08 25 but you cannot -- you cannot portray it as if he personally

03:48:11 1 said it because that's an issue that -- that's not clear  
03:48:15 2 here. It could be. It may not be. It is clear that he  
03:48:19 3 included this statement in a report that he wrote.

03:48:22 4 MR. MELSHEIMER: Okay.

03:48:22 5 THE COURT: And he can respond to that, whether,  
03:48:25 6 yes, I put it in there, but that doesn't mean I believed  
03:48:27 7 it. I didn't say it. That wasn't me. He can respond  
03:48:30 8 however is appropriate.

03:48:31 9 MS. GLASSER: And then that's the end of it; is  
03:48:33 10 that right?

03:48:33 11 THE COURT: And then that is the end of it. We  
03:48:35 12 move on. Okay.

03:48:36 13 MS. GLASSER: This is actually my copy.

03:48:38 14 MR. MELSHEIMER: Oh, that's yours. You can take  
03:48:40 15 it.

03:48:40 16 (Bench conference concluded.)

03:48:40 17 THE COURT: All right. Let's bring in the jury,  
03:48:42 18 please.

03:48:42 19 COURT SECURITY OFFICER: All rise.

03:48:43 20 (Jury in.)

03:49:08 21 THE COURT: Please be seated.

03:49:11 22 All right. We'll proceed with cross-examination  
03:49:17 23 of the witness by the Defendant.

03:49:19 24 MR. MELSHEIMER: May it please the Court.

03:49:19 25 CROSS-EXAMINATION

03:49:20 1 BY MR. MELSHEIMER:

03:49:20 2 Q. Mr. Calman, good afternoon, sir.

03:49:22 3 A. Good afternoon.

03:49:22 4 Q. Let's see if there's some things you and I can agree  
03:49:25 5 on.

03:49:26 6 You made a number of conclusions in this case  
03:49:30 7 regarding the commercial value of what you call the  
03:49:35 8 technology at issue, fair?

03:49:36 9 A. Yes, sir.

03:49:38 10 Q. And when you say the technology at issue, you are  
03:49:42 11 talking about the technology claimed in the specific  
03:49:46 12 patents in front of the jury, true?

03:49:48 13 A. Yes, sir, auto capture.

03:49:50 14 Q. You're not talking about some other technology, right?

03:49:54 15 A. No.

03:49:56 16 Q. You state that -- well, you just told us auto capture.

03:50:04 17 Now, you understand, though, sir, that the patents in this  
03:50:08 18 case describe doing auto capture in a particular way, true?

03:50:14 19 A. The patents describe what is called in the industry  
03:50:20 20 auto capture.

03:50:21 21 Q. And -- and -- and performing auto capture using the  
03:50:27 22 specific set of steps, true?

03:50:29 23 A. What is claimed in the patents, yes, sir.

03:50:32 24 Q. And you're not saying and you're not telling the jury  
03:50:36 25 that the patents claim manual capture, right?

03:50:40 1 A. No, these patents are all about auto capture.

03:50:43 2 Q. Auto capture with a specific set of steps as laid out  
03:50:47 3 in the claims of the patent. Can we agree on that?

03:50:50 4 A. Patent claims describe auto capture, yes, sir.

03:50:55 5 Q. Let me try this -- I just want to make sure you and I  
03:50:58 6 are communicating.

03:51:00 7 The patent claims describe auto capture in a  
03:51:02 8 specific set of steps that must be performed in the claims  
03:51:06 9 of the patent; is that correct, sir?

03:51:09 10 A. The claims describe auto capture, yes, sir.

03:51:16 11 MR. MELSHEIMER: Your Honor, I will just -- I  
03:51:18 12 would object as non-responsive because he's leaving off the  
03:51:20 13 specific set of steps. I don't think I'm getting an answer  
03:51:23 14 to that.

03:51:24 15 THE COURT: Ask your question again, counsel.

03:51:27 16 Q. (By Mr. Melsheimer) Mr. Calman, you understand that  
03:51:32 17 auto capture, as described in these patents, the patent  
03:51:35 18 claims, have a specific set of steps, true?

03:51:38 19 A. Yes, sir.

03:51:41 20 Q. And that's the technology you're talking about in terms  
03:51:45 21 of your valuation, correct?

03:51:48 22 A. Yes, that's right.

03:51:50 23 Q. Now, you have told the jury that you think that  
03:51:58 24 technology, the patent claims at issue, contributes a  
03:52:03 25 certain percentage to the value of mobile deposit as a

03:52:06 1 whole to Wells Fargo. Do I have that right?

03:52:11 2 A. Yes. I did an apportionment of auto capture as the  
03:52:16 3 value it contributes to the new channel of mobile remote  
03:52:20 4 deposit capture.

03:52:20 5 Q. And -- and you say that the auto capture, as described  
03:52:25 6 in the claims of these patents, is responsible for 40  
03:52:29 7 percent of the entire value of remote -- mobile remote  
03:52:36 8 deposit, right?

03:52:36 9 A. Repeat that one more time.

03:52:41 10 Q. It's your testimony that the auto capture, as defined  
03:52:44 11 in the claims of these patents, is responsible for 40  
03:52:48 12 percent of the value of the entire mobile remote deposit  
03:52:57 13 system?

03:52:57 14 A. Yes, that's correct.

03:52:58 15 Q. Now, you do a number of calculations to get to that  
03:53:02 16 valuation, don't you, sir?

03:53:03 17 A. I did.

03:53:05 18 Q. Okay. Now, I want to talk about this idea, though,  
03:53:09 19 that -- I want to talk about sort of the ultimate --

03:53:15 20 THE COURT: Don't tell him what you want to talk  
03:53:18 21 about. Ask him a question.

03:53:19 22 MR. MELSHEIMER: Thank you, Your Honor. I was  
03:53:21 23 pausing for a minute.

03:53:22 24 A. I'm fine. Please continue.

03:53:23 25 Q. (By Mr. Melsheimer) Okay. You had decades of

03:53:28 1 experience in banking, true, sir?

03:53:30 2 A. Yes, indeed.

03:53:31 3 Q. Going way back to the 1980s, right?

03:53:35 4 A. Yes, sir.

03:53:35 5 Q. Started working in small banks and ended up working in  
03:53:40 6 the largest bank in the United States, right?

03:53:43 7 A. It was at that time, yes, sir.

03:53:46 8 Q. Bank of America, right?

03:53:47 9 A. That's the one.

03:53:48 10 Q. Now, you became familiar in your experience at Bank of  
03:53:52 11 America and, subsequently, with mobile deposit systems,  
03:53:56 12 right?

03:53:56 13 A. I did.

03:53:56 14 Q. And mobile deposit is listed as one of the areas of  
03:53:59 15 expertise in your resume; is that right?

03:54:02 16 A. It is.

03:54:03 17 Q. And to quote it, you say: Mobile deposits, including  
03:54:08 18 early development and testing of the technology,  
03:54:12 19 deployment, and UI innovation.

03:54:15 20 Does that sound familiar?

03:54:16 21 A. That's from my CV, yes, sir.

03:54:19 22 Q. UI is user interface, right?

03:54:21 23 A. Yes. It's also sometimes called user experience, as  
03:54:27 24 well.

03:54:27 25 Q. User experience and user interface, that's how the

03:54:33 1 user, if you will, interacts with the particular

03:54:37 2 application, right?

03:54:38 3 A. That's that human computer interface, that's right.

03:54:42 4 Q. Whether you have to push buttons or touch things on the  
03:54:48 5 screen and all that sort of stuff, that's -- that's what we  
03:54:52 6 think of when we think of the user experience, right?

03:54:55 7 A. User experience can be more than that, but it does  
03:54:59 8 include those things you mentioned.

03:55:00 9 Q. And so is it fair to say that you had a pretty good  
03:55:06 10 understanding of mobile deposit systems when they were just  
03:55:12 11 manual capture?

03:55:16 12 A. Well, some of them, yes.

03:55:17 13 Q. So -- and I want to -- so let's -- let's talk about  
03:55:20 14 that.

03:55:21 15 When -- when manual capture is used, I think this  
03:55:26 16 is clear, the user takes the phones, pushes the button, and  
03:55:29 17 takes a picture of the check, right? That's manual  
03:55:33 18 capture?

03:55:34 19 A. That's right. The human decides when to take the  
03:55:36 20 picture, and they push the button.

03:55:38 21 Q. Now, once the picture is taken, there's a series of  
03:55:44 22 steps that occurs, true?

03:55:47 23 A. Sure. Yeah, of course.

03:55:52 24 Q. The image is transmitted to some servers, correct?

03:55:58 25 A. At some point after the image is captured, it's sent to



03:56:03 1 a server, sure.

03:56:04 2 Q. And a server is just a centralized computer, right?

03:56:06 3 A. I think it's -- I can't entirely agree with that

03:56:13 4 description.

03:56:14 5 Q. Well, a server is a dedicated or specialized computer

03:56:18 6 processor?

03:56:21 7 A. In some cases, yes.

03:56:23 8 Q. And the -- that image needs to get to the server

03:56:29 9 whether it was captured automatically or whether the user

03:56:34 10 had to push a button, right?

03:56:37 11 A. It has to get to downstream systems in order to be able

03:56:41 12 to deposit, sure.

03:56:42 13 Q. No matter how it was captured, right?

03:56:47 14 A. To make a deposit, yes, sir.

03:56:49 15 Q. Okay. And, to your knowledge, there's not a different

03:56:56 16 server on the bank side for taking these images using

03:57:03 17 manual capture versus using auto capture?

03:57:08 18 A. Are we talking about Wells Fargo?

03:57:10 19 Q. Banking generally, sir.

03:57:13 20 A. I think it depends.

03:57:15 21 Q. Okay. What about Wells Fargo?

03:57:16 22 A. I didn't see any evidence of a separate server for

03:57:23 23 manual capture images or auto capture images, no.

03:57:28 24 Q. And once it gets to the server, however it's gotten in

03:57:32 25 the system, whether it's manual or automatic, the server

03:57:36 1 has to do some things to process the check, right?

03:57:39 2 A. It depends.

03:57:44 3 Q. Well, it has to perform some optical character

03:57:48 4 recognition, doesn't it?

03:57:49 5 A. In some implementations, yes.

03:57:54 6 Q. It has to be able to gather all the information that's

03:58:00 7 on the check and do -- do some things with it, right?

03:58:03 8 A. Can you re -- say that one more time.

03:58:09 9 Q. Well, when the check gets -- when the image of the

03:58:14 10 check gets to a ser -- gets to the server at the bank, that

03:58:19 11 processor, that computer hardware has to do some things to

03:58:27 12 get that check processed into the bank system, true?

03:58:31 13 A. In general, I agree.

03:58:36 14 Q. There has to be -- for example, on the server at the

03:58:40 15 bank, there has to be some image quality analysis, right?

03:58:46 16 A. I think that depends.

03:58:48 17 Q. Well, is it your testimony, sir, that all the image

03:58:52 18 quality analysis happens on the mobile phone or smart

03:58:55 19 device, or does some of it happen at the bank server

03:58:59 20 itself, or do you know?

03:58:59 21 A. That all depends on configuration.

03:59:04 22 Q. It can be the case that image quality analysis is

03:59:09 23 conducted at the bank-side server, true?

03:59:12 24 A. Well, that's the traditional way it was always done

03:59:16 25 before USAA created auto capture.

03:59:17 1 Q. Sir, you just told the jury that you USAA created --

03:59:31 2 was the first to create auto capture?

03:59:34 3 A. That's my belief, yes, sir.

03:59:36 4 Q. Now, sir, isn't it true that before you were hired as

03:59:42 5 an expert in this case for USAA, back in 2017, you wrote a

03:59:51 6 report that contained a statement that someone else was the

03:59:58 7 first to develop a mobile app with auto capture of a check?

04:00:06 8 A. I don't recall that.

04:00:07 9 Q. Can you look, sir --

04:00:13 10 MR. MELSHEIMER: Your Honor, may we approach the

04:00:14 11 witness with some binders?

04:00:16 12 THE COURT: You may.

04:00:24 13 Opposing counsel has these, as well?

04:00:27 14 MS. GLASSER: We do.

04:00:28 15 MR. MELSHEIMER: Yes, Your Honor.

04:00:29 16 THE COURT: All right. Let's proceed.

04:00:30 17 Q. (By Mr. Melsheimer) I'd like you to look at Tab 18,

04:00:35 18 Mr. Calman. And, again, without describing anything about

04:00:37 19 it, do you recognize Tab 18 as a report that you created in

04:00:43 20 October of 2017?

04:00:44 21 A. There are three books. Which book do you mean?

04:00:52 22 Q. It's in the Calman Exhibit Book, Tab 18?

04:00:55 23 A. Okay. Just a moment.

04:01:03 24 Q. Are you there, sir?

04:01:05 25 A. I'm at Tab 18, yes, sir.

04:01:06 1 Q. And do you see that? Again, without saying anything  
04:01:09 2 about what it is, would you -- would you -- do you  
04:01:13 3 recognize that as a report that you prepared in October of  
04:01:15 4 2017, right?

04:01:16 5 A. It is dated October 2017. And it does have the logo  
04:01:25 6 from my company, yes, sir.

04:01:26 7 Q. Okay. And that is before you were hired as an expert  
04:01:30 8 in this case by USAA, true?

04:01:32 9 A. True.

04:01:35 10 Q. And if you will turn to Page 4, sir. And I just want  
04:01:42 11 to publish one -- one-and-a-half lines to the -- to the  
04:01:47 12 jury and to you, sir.

04:01:48 13 Didn't -- didn't you --

04:01:52 14 MS. GLASSER: Your Honor, I had a different  
04:01:54 15 understanding of the question he was going to ask. May I  
04:01:57 16 approach?

04:01:58 17 THE COURT: Put the lines back on the screen,  
04:02:00 18 please, so I can see them.

04:02:09 19 No, Ms. Glasser, have a seat.

04:02:10 20 MS. GLASSER: Okay.

04:02:11 21 THE COURT: Ask your question, Mr. Melsheimer.

04:02:15 22 Q. (By Mr. Melsheimer) In -- in -- back in October of  
04:02:17 23 2017, sir, didn't you prepare a report that had this  
04:02:23 24 statement in it with this language: Principal developer on  
04:02:27 25 Merrill Lynch app, comma, first mobile deposit app to

04:02:31 1 automatically take a photo of a check image -- of a check  
04:02:35 2 for image check deposit.

04:02:38 3 Did I read that correctly?

04:02:39 4 A. Yes, sir, but this isn't auto capture as we've been  
04:02:43 5 discussing it.

04:02:44 6 THE COURT: You can pull that down now.

04:02:58 7 Q. (By Mr. Melsheimer) So let's get back to sort of the  
04:03:00 8 life of this check once it's gotten into the bank system.  
04:03:04 9 All right?

04:03:04 10 A. Okay.

04:03:05 11 Q. And, again, whether it's gotten into the bank system by  
04:03:09 12 manual capture or auto capture, these are what my questions  
04:03:15 13 are to you, okay?

04:03:17 14 A. Okay.

04:03:17 15 Q. So the bank's -- the servers -- the checks show up on  
04:03:26 16 the servers, and there has to be work done on the bank side  
04:03:29 17 of things to process the check, right?

04:03:32 18 A. Oh, sure. Yes, of course.

04:03:34 19 Q. And that work has to be done really no matter how the  
04:03:41 20 check has made its way to the bank, right?

04:03:43 21 A. Well, it depends on a lot of things, but stuff has to  
04:03:47 22 be done in order to post and clear checks, sure.

04:03:50 23 Q. Right. Posting and clearing a check has to be done  
04:03:53 24 whether it's captured manually on a mobile phone, whether  
04:03:57 25 it's done with auto capture, one particular way or another

04:04:00 1 of doing that, or whether someone goes to an ATM and puts  
04:04:05 2 the check in, or shows up at the bank and -- with the  
04:04:09 3 check -- the paper check, right?

04:04:10 4 A. So banks are obligated to process their customers'  
04:04:14 5 deposits, absolutely.

04:04:15 6 Q. And that is a -- a clearing -- that's called a clearing  
04:04:19 7 process, right?

04:04:19 8 A. Sometimes.

04:04:20 9 Q. And you have to make -- the bank is going to make  
04:04:27 10 entries in its systems about the amount of the check and  
04:04:32 11 what account it's either going to or from and things of  
04:04:36 12 that nature. That's what's called clearing, right?

04:04:38 13 A. That's not exactly right.

04:04:39 14 Q. All right. Let me say it a different way.

04:04:41 15 A. Uh-huh.

04:04:42 16 Q. The process of clearing a check involves typically --  
04:04:47 17 or can involve more than one bank, right?

04:04:49 18 A. Oh, if you're talking about clearing, it always  
04:04:54 19 involves another bank.

04:04:54 20 Q. Because in clearing, you might have a check written  
04:04:58 21 from -- let's just take an example of me to you. Let's say  
04:05:01 22 I write you a check, and I use Wells Fargo or Chase. And  
04:05:05 23 let's say your -- your account is Bank of America, okay?  
04:05:12 24 If I write you a check and you want it deposited in your  
04:05:16 25 Bank of America account, no matter how you're going to

04:05:18 1 deposit it --

04:05:18 2 A. Uh-huh.

04:05:19 3 Q. -- okay, that check has to go through certain processes  
04:05:24 4 at both my bank, right, and at your bank?

04:05:30 5 A. Well, would be in the other order. It would be at my  
04:05:34 6 bank, and then it would be at your bank. But that's sort  
04:05:37 7 of right.

04:05:38 8 Q. You would deposit it at your bank. It would have to go  
04:05:41 9 through the process. There had to be -- make sure I have  
04:05:43 10 money in my account to satisfy whatever check I've written  
04:05:46 11 to you, right?

04:05:46 12 A. Well, that wouldn't happen at my bank.

04:05:46 13 Q. Well, but you --

04:05:48 14 A. That would happen at your bank.

04:05:49 15 Q. Sir, we're talking about the process. The process is a  
04:05:52 16 back-and-forth between those two banks, right?

04:05:54 17 A. I wouldn't characterize it as back and forth, no, sir.

04:05:59 18 Q. Would you characterize it as a process that involves  
04:06:02 19 two banks?

04:06:04 20 A. Yes, I think I said that for sure.

04:06:06 21 Q. And the check clearing process is something that's been  
04:06:09 22 known for decades, right?

04:06:12 23 A. Oh, most definitely.

04:06:15 24 Q. And, again, you have to clear checks no matter how they  
04:06:18 25 get in the system, fair? Or process checks no matter how

04:06:22 1 they get in the system, right?

04:06:23 2 A. Yeah, like I said, banks are obligated to process their  
04:06:26 3 customers' deposits.

04:06:28 4 Q. Because they may not clear?

04:06:29 5 A. That's definitely true.

04:06:32 6 Q. Right, you might have a check where the person writes a  
04:06:35 7 check, but they don't have enough in their account to cover  
04:06:38 8 the check that you've deposited.

04:06:39 9 And then there will be some communication back  
04:06:41 10 to -- if I've written that check, I'll find out from my  
04:06:45 11 bank, hey, we can't honor this. And you'll find out from  
04:06:48 12 your bank that, hey, we can't credit you because this  
04:06:52 13 person doesn't have the money.

04:06:53 14 A. It's a really complex system, that's right.

04:06:56 15 Q. All right, sir. So let me talk about checks generally.  
04:07:10 16 And let's -- let's go to your report, and I think you have  
04:07:13 17 it there in your binder, sir, Section -- do you have your  
04:07:19 18 report, sir?

04:07:19 19 A. Yes, sir.

04:07:21 20 Q. Okay. Can you go to Paragraph 18A -- or Section 18A of  
04:07:28 21 your report?

04:07:35 22 A. Numeral 18A, yes, sir, I'm there.

04:07:38 23 Q. And that's titled, I believe, The Importance of Mobile  
04:07:41 24 Deposit to Wells Fargo?

04:07:41 25 A. It is.



04:07:42 1 Q. Okay. And you say: Having an effective mobile deposit  
04:07:46 2 system is critical -- is of critical importance for Wells  
04:07:52 3 Fargo in a competitive banking market, right?

04:07:54 4 A. Yes, sir.

04:07:55 5 Q. Okay. Now, you don't say auto capture in that  
04:07:57 6 sentence, do you, sir?

04:07:58 7 A. No, I say an effective mobile deposit system.

04:08:02 8 Q. Because mobile deposit system involves things other  
04:08:07 9 than auto capture, true?

04:08:08 10 A. An effective mobile deposit system does include auto  
04:08:16 11 capture.

04:08:16 12 Q. But it also involves other things, doesn't it, sir?

04:08:19 13 A. Oh, yeah, that's the other 60 percent.

04:08:21 14 Q. And you know that Wells Fargo previously had a mobile  
04:08:26 15 deposit system that did not have auto capture, right?

04:08:28 16 A. Definitely.

04:08:29 17 Q. Now, one of the things that we -- that -- were you here  
04:08:37 18 for the opening statement?

04:08:38 19 A. The majority, yes, sir.

04:08:41 20 Q. So one of the things that was discussed in the opening  
04:08:44 21 was whether or not checks -- paper checks have the same  
04:08:48 22 importance as they used to, right?

04:08:51 23 A. I heard that mentioned, yes, sir.

04:08:53 24 Q. And you agree -- and -- you agree that checks have been  
04:09:02 25 of declining importance over the years, fair?

04:09:05 1 A. No, I don't agree with that statement.

04:09:06 2 Q. Well, sir, haven't you previously testified under oath  
04:09:11 3 that -- that checks are a dying channel?

04:09:16 4 A. I don't recall that testimony.

04:09:18 5 Q. Okay. Well, let's take a look at it, sir.

04:09:25 6 Take a look at your prior testimony binder, sir,  
04:09:41 7 Tab 1.

04:09:45 8 A. Yes, sir.

04:09:47 9 Q. And if you would, sir, go to Page 131.

04:09:51 10 A. Okay.

04:09:52 11 Q. Tell me when you're there, sir.

04:10:04 12 A. I'm at Page 131.

04:10:05 13 Q. And if you look, sir, at the -- the -- the -- the  
04:10:19 14 answer starting on Line 4, you talk about the payments  
04:10:25 15 leadership council at the bank looks at payments in  
04:10:29 16 general, which is really focused, again, on card and ACH.  
04:10:34 17 Do you see that?

04:10:34 18 A. I do.

04:10:35 19 Q. And you say: Check is a, you know, declining, dying  
04:10:42 20 product, or dying channel. Did I read that correctly, sir?

04:10:45 21 A. That's the testimony as it appears.

04:10:47 22 Q. And you said that back in 2007, right?

04:10:52 23 A. That was the point of view, yes, sir.

04:10:54 24 Q. Now, there were some projections made at Wells Fargo  
04:11:08 25 about how successful mobile deposit would be when they

04:11:14 1 first implemented that product using the Mitek software,  
04:11:17 2 fair?

04:11:21 3 A. I wouldn't quite agree with that the way you said that,  
04:11:24 4 but you're close.

04:11:24 5 Q. Well, did you talk about some projections, sir, in your  
04:11:30 6 report in Paragraph 514?

04:11:36 7 A. I did talk about projections prior to the launch, yes,  
04:11:39 8 sir.

04:11:39 9 Q. Can you look at your report, sir, and Paragraph 514?

04:11:48 10 A. 514. Oh, I'm sorry, Paragraph 514.

04:11:57 11 Q. Paragraph 514, sir, I apologize.

04:12:01 12 A. I was looking at page. I'm there.

04:12:18 13 Q. And here, I'm going to illustrate -- display for the  
04:12:22 14 jury, if we would, the chart on Paragraph 514, sir. This  
04:12:28 15 is a -- this is a Wells Fargo document or Wells Fargo data  
04:12:34 16 that shows both the actual mobile deposits versus forecast.  
04:12:40 17 Are you with me?

04:12:40 18 A. Yes, sir.

04:12:41 19 Q. Okay. So let's just take a look at what is shown in  
04:12:44 20 here. Now, this is -- this is data that actually goes up  
04:12:53 21 to 2018, does it not, sir?

04:12:54 22 A. Yes, sir.

04:12:59 23 Q. And if you start -- and just to orient the jury,  
04:13:02 24 there's different colors of the lines. There was -- the  
04:13:08 25 green is the forecast for the high side, the red is the

04:13:11 1 forecast for the median, and the purple is the forecast for  
04:13:15 2 the low, and then the actual is the yellow. Is that right?

04:13:20 3 A. You got it right.

04:13:22 4 Q. So it looks like to me, sir, that the actual mobile  
04:13:29 5 deposits that were -- that were experienced at Wells Fargo  
04:13:37 6 Bank quite exceeded the projections that they made back in  
04:13:39 7 2012, right?

04:13:40 8 A. Yes, indeed.

04:13:41 9 Q. You know that it starts in 2012, this chart, because  
04:13:47 10 that's when Wells Fargo started offering mobile -- the  
04:13:52 11 mobile deposit app for people's smartphones, right?

04:13:57 12 A. Well, that was the first year of the data table, and it  
04:14:01 13 was also the year that they launched mobile deposit, that's  
04:14:05 14 right.

04:14:05 15 Q. No doubt -- I just -- just so we're clear, you're not  
04:14:09 16 doubting that 2012 was the date that Wells Fargo launched  
04:14:13 17 its mobile deposit app, are you, sir?

04:14:15 18 A. No.

04:14:17 19 Q. Okay. And it looks like that for the year 2012, it's  
04:14:25 20 not going straight up, but it's going up at about a  
04:14:32 21 45-degree angle, would you say, maybe even a 60-degree  
04:14:36 22 angle?

04:14:37 23 A. Well, sir, this is annual full year data. So you can't  
04:14:40 24 use the angle or the -- any of the intermediate points.  
04:14:45 25 You can only use the -- if you zoom back out you'll see the

04:14:48 1 data table. You can only use those full year figures. So

04:14:52 2 I can't agree with your interpretation.

04:14:53 3 Q. Well, sir, let's look at what's happening with the

04:14:56 4 line, though. The line starts in 2012, and it's going up,

04:15:01 5 true?

04:15:01 6 A. Again, it's -- it would be incorrect to interpret this

04:15:09 7 chart the way you are.

04:15:10 8 Q. You don't think that mobile deposits were going up at

04:15:17 9 Wells Fargo in 2012?

04:15:19 10 A. That's not what I'm saying, sir.

04:15:21 11 Q. Okay. So let me see if I can -- let's see if you --

04:15:24 12 let's see if you and I can communicate better on this.

04:15:27 13 This chart goes from 2012 to 2018, right?

04:15:32 14 A. It contains annual values for each of those years, yes,

04:15:36 15 sir.

04:15:36 16 Q. And it looks like from 2012 to 2013, there's a pretty

04:15:45 17 significant increase in mobile deposits?

04:15:48 18 A. As I said, if you show the table along with the chart,

04:15:51 19 as it's depicted in Paragraph 514, you can see that's true

04:15:54 20 for all four lines, yes.

04:15:58 21 MR. MELSHEIMER: Let's back it up.

04:16:00 22 Q. (By Mr. Melsheimer) Is this what you want to look at,

04:16:08 23 sir?

04:16:08 24 A. This is the data upon which that chart is built, yes,

04:16:11 25 sir.

04:16:11 1 Q. And just so we're clear, this data is plotted, if you  
04:16:17 2 will, the data on the right is represented by the graphs on  
04:16:23 3 the left, isn't that what's shown here, sir?

04:16:26 4 A. Absolutely correct.

04:16:27 5 Q. Okay. And it shows that in 2012 the actual mobile  
04:16:36 6 deposits were 1.6 million deposits, is that -- am I reading  
04:16:41 7 that correctly?

04:16:41 8 A. For the full year of 2012, it was 1,601,251, that's  
04:16:49 9 right.

04:16:49 10 Q. To be clear, and to be fair with you, sir, did -- we're  
04:16:51 11 not saying that Wells Fargo even had the app for the  
04:16:53 12 entirety of 2012, or do you know?

04:16:55 13 A. It was not -- no, they did not have the app released to  
04:17:00 14 the public for the full year of 2012, that's right.

04:17:03 15 Q. So you said the full year, but it really measures --  
04:17:09 16 whatever part of the year the app was available in 2012,  
04:17:13 17 right?

04:17:13 18 A. That's the total number of actual mobile deposits in  
04:17:15 19 the year 2012.

04:17:20 20 Q. And it's dramatically increased from 2012 to 2013, is  
04:17:26 21 it not, sir?

04:17:27 22 A. Well, for the full year of 2012, yes, as compared to  
04:17:30 23 the full year of 2013, you bet.

04:17:32 24 Q. And we know that in 2012, there was manual capture,  
04:17:39 25 right?

04:17:39 1 A. That's right.

04:17:39 2 Q. We know in 2013, there was manual capture, correct?

04:17:44 3 A. There was manual capture in every year of this chart.

04:17:46 4 Q. Sir, in 2012 and 2013, there was only manual capture in  
04:17:54 5 the Wells Fargo app, you know that, don't you?

04:17:56 6 A. I do.

04:17:57 7 Q. You know that it was only in May or so of 2014 that  
04:18:08 8 Wells Fargo added the MiSnap feature to its mobile app,  
04:18:14 9 correct?

04:18:14 10 A. Yes, sir.

04:18:18 11 Q. And, again, we can look at the data on the left -- or,  
04:18:24 12 excuse me, on the right, and we can look on the chart on  
04:18:27 13 the left and see what's happening with the actual mobile  
04:18:32 14 deposits and then the projections, true?

04:18:34 15 A. That's right. You can see that after auto capture was  
04:18:39 16 launched, that gap just got bigger and bigger and bigger.

04:18:45 17 MR. MELSHEIMER: Objection, nonresponsive, Your  
04:18:47 18 Honor. Move to strike.

04:18:50 19 THE COURT: Overruled.

04:18:51 20 Q. (By Mr. Melsheimer) What I -- what I see, sir, and I  
04:18:56 21 agree with what you said about the increase, but can we  
04:18:58 22 agree that between 2012 and 2013, there was about 16  
04:19:08 23 million more mobile deposits year over year just using  
04:19:15 24 manual capture, true?

04:19:16 25 A. Well, as you pointed out, 2012 wasn't a full year. So

04:19:19 1 you really can't compare 2012 to 2013, as though it was a  
04:19:24 2 year over year increase because you don't have a full year  
04:19:27 3 in 2012.

04:19:27 4 Q. Well, we can't do that for 2014 either, can we, sir?

04:19:30 5 A. It's apples and oranges. I'm not sure I understand.

04:19:36 6 Q. Sir, mobile deposit with auto capture wasn't offered  
04:19:43 7 for the whole year of 2014 either, was it, sir?

04:19:46 8 A. No, that's true.

04:19:48 9 Q. Okay. And, in fact, sir, can you agree with me that  
04:19:58 10 the -- the -- what Wells Fargo experienced with manual  
04:20:02 11 capture in 2013 was numbers that -- that it wasn't  
04:20:13 12 projected to hit in the median or low forecast until 2017  
04:20:19 13 or 2018, right?

04:20:24 14 A. Yeah, the actual exceeded the high forecast by 26  
04:20:29 15 percent, and that low forecast was just a half of the high  
04:20:33 16 forecast, so it was even, you're right, later before that  
04:20:37 17 low forecast would catch up.

04:20:40 18 Q. Let's be clear, sir. The actual numbers of mobile  
04:20:42 19 deposit in 2013 were 17 million, right?

04:20:45 20 A. 17 --

04:20:45 21 Q. 17.6 million, true?

04:20:48 22 A. Yes, sir.

04:20:48 23 Q. And that wasn't forecasted under the median forecast  
04:20:56 24 until 2017, that that kind of number, was it, sir?

04:21:01 25 A. I can't disagree. That's what the chart shows.



04:21:13 1 Q. I want to talk to you about your Net Promoter Score,  
04:21:26 2 sir. You do a model called Net Promoter Score, and you  
04:21:30 3 said that's all based on this notion of would you recommend  
04:21:33 4 the services of this company to a friend.

04:21:36 5 A. Okay. So, A, it's not my Net Promoter Score.

04:21:40 6 Q. It's your analysis?

04:21:41 7 A. And, B, it's not my notion. This is a well-accepted  
04:21:45 8 industry model that's adopted by many companies around the  
04:21:49 9 world.

04:21:49 10 Q. I'm not criticizing it at all, sir. I want -- it's --  
04:21:53 11 it's in your report, right?

04:21:54 12 A. Oh, yes, sir, Net Promoter System is in my report.

04:21:57 13 Q. It's what -- it's a model that you, Matt Calman, adopt  
04:22:02 14 and write about in your report, true?

04:22:04 15 A. I wouldn't quite say it that way.

04:22:08 16 Q. Is Net Promoter Score analysis contained within the  
04:22:12 17 expert report of Matt Calman or is it not?

04:22:14 18 A. I do reference insights from Bain's NPS system, for  
04:22:21 19 sure.

04:22:21 20 Q. And that is called Net Promoter, isn't it, sir?

04:22:24 21 A. The system -- right. "S" can mean system or score.  
04:22:27 22 But NPS is Bain's model, and I did adopt insights from that  
04:22:33 23 model, you bet.

04:22:34 24 Q. And your model depends in part on Wells Fargo being a  
04:22:41 25 leader in mobile banking, right?

04:22:42 1 A. Yes.

04:22:48 2 Q. But mobile banking is more than just mobile deposit,  
04:22:51 3 right?

04:22:51 4 A. Well, they were a leader in both.

04:22:56 5 Q. Mobile banking is more than mobile deposit; isn't that  
04:23:03 6 right, sir?

04:23:03 7 A. Of course.

04:23:04 8 Q. Mobile banking involves things like checking your  
04:23:09 9 account balance, right?

04:23:11 10 A. Yes.

04:23:11 11 Q. Transferring money between accounts, right?

04:23:14 12 A. Yes.

04:23:14 13 Q. Paying bills, right?

04:23:17 14 A. In some, yes.

04:23:20 15 Q. None of those services involve depositing checks, do  
04:23:24 16 they, sir?

04:23:25 17 A. Not directly, no.

04:23:27 18 Q. Now, sir, I want to take a look at something that you  
04:23:38 19 cite in your report called The Mobile 2015 Roadmap. This  
04:23:48 20 is a Document 419, and I believe it's in your exhibit  
04:23:51 21 binder, sir, at Tab 7.

04:23:54 22 A. Just a second, please. Okay. The --

04:24:03 23 Q. I'm sorry, sir?

04:24:05 24 A. I apologize.

04:24:05 25 Q. Tab -- Tab 7 --

04:24:07 1 A. Of --

04:24:08 2 Q. -- in the binder. It's a Wells Fargo document entitled  
04:24:11 3 Mobile 2015 Roadmap.

04:24:13 4 A. This is the Calman exhibits binder?

04:24:17 5 Q. Yes, sir.

04:24:18 6 A. And tab number?

04:24:20 7 Q. Tab No. 7.

04:24:25 8 A. I'm there.

04:24:25 9 Q. If you need to confirm, sir, it's referenced in your  
04:24:30 10 report at Paragraph 496, but you -- do you remember looking  
04:24:33 11 at this?

04:24:34 12 A. Okay. I'm at Paragraph 496, and I have PX-419; is that  
04:24:58 13 correct?

04:24:58 14 Q. Yes, sir.

04:24:59 15 A. Okay.

04:24:59 16 Q. So this is a -- a roadmap that Wells Fargo prepared for  
04:25:04 17 its mobile banking operations, right?

04:25:06 18 A. Oh, sorry, 496. Here we go, okay. Yeah, I'm there.

04:25:18 19 Q. We're all looking at it. Okay. It's a mobile roadmap  
04:25:22 20 as of 2015; isn't that right, sir?

04:25:24 21 A. Yes, sir.

04:25:24 22 Q. These are common -- you saw these kind of things when  
04:25:29 23 you worked for Bank of America, didn't you?

04:25:30 24 A. Saw them and created them, you bet.

04:25:32 25 Q. These are sort of looking -- forward-looking documents

04:25:37 1 about plans and -- and assessments of how the company is  
04:25:40 2 doing in particular areas?

04:25:42 3 A. They're internal use only. Like I said earlier,  
04:25:47 4 they're -- they talk about features that may or may not be  
04:25:50 5 coming in the future.

04:25:51 6 Q. And there's often discussion about how we can get  
04:25:54 7 better, what can we do differently, what's working, things  
04:25:58 8 of that nature, right?

04:25:59 9 A. You bet.

04:26:00 10 Q. And the first substantive page of the document talks  
04:26:08 11 about the mobile channel, right?

04:26:11 12 A. Talking about Page 1? Yeah.

04:26:13 13 Q. And I'm also displaying it, sir.

04:26:17 14 A. Uh-huh.

04:26:17 15 Q. And this talks about the mobile channel where it's got  
04:26:20 16 the mobile website, which is wells Fargo.com, the mobile  
04:26:26 17 app, the text banking, and then even tablet applications.  
04:26:32 18 Do you see that?

04:26:32 19 A. I do.

04:26:33 20 Q. And those are all items of mobile banking that are not  
04:26:38 21 specifically related to auto capture, correct, sir?

04:26:41 22 A. I agree. Oh, well, if I may, auto capture is included  
04:26:50 23 in some of those.

04:26:51 24 Q. Understood. So I'm looking at a slide. If you want to  
04:27:00 25 look on Page 4, you can look in the -- in the -- in your

04:27:04 1 binder, the 2014/2015 Focus for Retail Mobile. Do you see  
04:27:09 2 that?

04:27:09 3 A. I see it.

04:27:10 4 Q. Now, retail banking, that's what we mean -- people  
04:27:17 5 just -- ordinary people banking, as opposed to business  
04:27:21 6 banking, right? That's retail banking?

04:27:22 7 A. I disagree.

04:27:23 8 Q. So you think retail banking also includes business  
04:27:26 9 banking?

04:27:26 10 A. It does.

04:27:27 11 Q. Okay. So retail banking can include business banking  
04:27:31 12 or consumer banking?

04:27:35 13 A. Yes.

04:27:36 14 Q. Well, I -- I mean, I want to get it straight from you,  
04:27:39 15 sir. Is -- is retail banking -- is that both consumer and  
04:27:42 16 businesses?

04:27:43 17 A. Yes, it is.

04:27:45 18 Q. Okay. What do we refer to when we're just talking  
04:27:50 19 about non-business banking, i.e., just individual  
04:27:53 20 consumers? What's that called?

04:27:55 21 A. When we're just -- can you rephrase?

04:27:58 22 Q. What do we call it when we're just talking about  
04:28:02 23 non-business customers, sir?

04:28:03 24 A. I guess it depends.

04:28:09 25 Q. Depends on what?

04:28:11 1 A. So in my experience at Bank of America, consumer  
04:28:14 2 banking was both individuals, like you and me, and what  
04:28:19 3 were called small business and what was called small and  
04:28:22 4 medium enterprise.

04:28:25 5 But at Bank of America, small business is any  
04:28:27 6 business that makes less than \$500 million a year. So to  
04:28:32 7 some people, that's not really small business, that's real  
04:28:34 8 business.

04:28:35 9 Q. Retail includes all of that at Wells Fargo, as far as  
04:28:41 10 you know, right?

04:28:42 11 A. Well, I don't know exactly how Wells Fargo makes  
04:28:45 12 their -- their market segmentation, as it's called.

04:28:47 13 Q. Well, let's take a look at some of the things that are  
04:28:50 14 discussed in this roadmap, sir.

04:28:55 15 There's a mobile My Spending. Do you see that?

04:28:59 16 A. I do.

04:28:59 17 Q. That's introducing PFM functionality to the mobile  
04:29:03 18 experience by providing customers the ability to view their  
04:29:06 19 spending in graphical form. Do you see that?

04:29:08 20 A. Yeah. PFM is short for personal financial management.

04:29:12 21 Q. That doesn't have anything to do with the auto capture  
04:29:15 22 as described in these patents, does it, sir?

04:29:17 23 A. No.

04:29:19 24 Q. Something called Mobile IRT. Do you see that, sir?

04:29:31 25 Mobile IRT is institutional retirement and trust

04:29:35 1 experience. Do you see that?

04:29:37 2 A. Yes, sir.

04:29:37 3 Q. Is that like investments?

04:29:39 4 A. I think it includes investments.

04:29:41 5 Q. And that doesn't have anything to do with auto capture  
04:29:43 6 as described in these patents, does it, sir?

04:29:45 7 A. I wouldn't agree with that necessarily.

04:29:50 8 Q. Well, is there anything on this slide that references  
04:29:53 9 any form of auto capture or mobile deposit?

04:29:55 10 A. I know at Bank of America, the Merrill Lynch app did  
04:30:01 11 include mobile deposit. So I don't know if Wells Fargo did  
04:30:04 12 that, too, or not.

04:30:05 13 Q. Sir, my question was: Do you see anything on this  
04:30:07 14 slide that rep -- that references mobile deposit or the  
04:30:12 15 USAA form of auto capture?

04:30:13 16 A. There are some icons at the bottom of the screen. I  
04:30:21 17 don't know what those do. Well, it says: The benefit is  
04:30:28 18 to provide access to top features desired for mobile  
04:30:32 19 access. So I can't really tell.

04:30:34 20 Q. Do you see the words "mobile deposit" or "auto capture"  
04:30:38 21 on this slide, sir?

04:30:39 22 A. Let me keep reading. I don't see the words "auto  
04:30:53 23 capture," but in two places, I see this notion of top  
04:30:56 24 features desired for mobile access, and I just know how  
04:31:00 25 much customers love mobile deposit.

04:31:02 1 Q. Rewards Mobile Optimization. Do you see that, sir, on  
04:31:08 2 Page 7?

04:31:08 3 A. I do.

04:31:09 4 Q. Nothing about mobile deposit or auto capture here, is  
04:31:12 5 there, sir?

04:31:13 6 A. It's hard to read all the links, but I -- I don't see  
04:31:29 7 it. And there's some icons -- again, on this screenshot on  
04:31:32 8 the right, it's really hard to see at the bottom, so I  
04:31:35 9 can't be sure. But, you're right, I don't see the words  
04:31:38 10 "mobile deposit" or "auto capture" on here.

04:31:39 11 Q. Well, isn't this talking about, sir, this idea of  
04:31:43 12 having reward points and dealing with that in some way?

04:31:48 13 A. Maybe you get rewards for doing mobile deposits.

04:31:52 14 Q. You don't see that on the slide, do you, sir?

04:31:55 15 A. Not specifically.

04:32:02 16 Q. Travel Notifications?

04:32:06 17 A. I'll just mention we did look at that kind of thing  
04:32:09 18 when I was at Bank of America.

04:32:14 19 I'm sorry, the next page?

04:32:14 20 MR. MELSHEIMER: I'm going to object to the answer  
04:32:18 21 of, he looked at that kind of thing at Bank of America, as  
04:32:21 22 nonresponsive, Your Honor.

04:32:21 23 THE COURT: I'll sustain that.

04:32:23 24 Q. (By Mr. Melsheimer) Travel Notifications, sir, you can  
04:32:24 25 get -- enables customers to leverage mobile and online



04:32:27 1 channel to inform Wells Fargo about their travel plans.  
04:32:31 2 This will help customers avoid issues using their cards  
04:32:35 3 while traveling.

04:32:36 4 Do you see that?

04:32:36 5 A. I see that, yeah.

04:32:38 6 Q. And we can go through, and we won't, but there's any  
04:32:41 7 number of other things in this roadmap that are other  
04:32:44 8 aspects of mobile banking, true?

04:32:47 9 A. Oh, definitely.

04:32:51 10 Q. Some of these are things that the bank is going to  
04:32:54 11 implement. Some of them are things the bank has  
04:32:57 12 implemented. And some of them are things the bank is  
04:33:00 13 simply thinking about implementing, right?

04:33:03 14 A. It all just depends.

04:33:31 15 Q. Now, you were still at -- at -- you were still at Bank  
04:33:35 16 of America in 2009, right?

04:33:36 17 A. 2009, definitely.

04:33:38 18 Q. And when did Bank of America start offering mobile  
04:33:44 19 deposit with manual capture?

04:33:49 20 A. It was three years after USAA. It was in 2012.

04:33:53 21 Q. So is it fair -- was Bank of America the biggest bank  
04:33:58 22 at that time in the country, sir?

04:34:00 23 THE COURT: Counsel, approach the bench, please.

04:34:03 24 (Bench conference.)

04:34:09 25 THE COURT: There's an order in limine that

04:34:12 1 prohibits talking about size of banks, and you've referred  
04:34:15 2 to Bank of America twice as the biggest bank in America.  
04:34:18 3 You're going to open a door I'm going to let the Plaintiffs  
04:34:22 4 go through with regard to your client,  
04:34:24 5 Mr. Melsheimer.

04:34:25 6 MR. MELSHEIMER: I'll withdraw that.

04:34:26 7 THE COURT: And I want to know why we're talking  
04:34:28 8 about Bank of America.

04:34:29 9 MR. MELSHEIMER: Just because there was a  
04:34:30 10 suggestion that you couldn't do manual capture --

04:34:32 11 THE COURT: I want to hear about Wells Fargo, not  
04:34:34 12 Bank of America.

04:34:34 13 MR. MELSHEIMER: Thank you, Your Honor.

04:34:35 14 MR. SHEASBY: Thank you, Your Honor.

04:34:36 15 (Bench conference concluded.)

04:34:40 16 THE COURT: Let's proceed.

04:34:41 17 MR. MELSHEIMER: Thank you, Your Honor.

04:34:42 18 Q. (By Mr. Melsheimer) You were shown some pictures of  
04:34:58 19 the Wells Fargo app as compared to the USAA app, in your  
04:35:01 20 direct examination, sir. Do you remember that?

04:35:04 21 A. Left and right, yes, sir.

04:35:06 22 Q. Yes, sir. And you understand that those pictures  
04:35:11 23 aren't relevant to the issue of patent infringement in this  
04:35:14 24 case, right?

04:35:16 25 A. Okay. Can you explain?

04:35:19 1 Q. Well, do you understand that the patents in this case  
04:35:24 2 do not involve the -- how one program looks versus how  
04:35:29 3 another program looks? Do you understand that or not?

04:35:33 4 A. Oh, well, the patents are not about the aesthetics.  
04:35:37 5 They're about how the program -- how the system works.

04:35:39 6 Q. How the code inside the smartphone operates, right?

04:35:42 7 A. And the user experience that it creates.

04:35:45 8 Q. Which could be auto capture or manual capture, as we've  
04:35:50 9 been discussing, right?

04:35:51 10 A. Well, the patents are all about auto capture.

04:35:53 11 Q. Well, they are, sir. Thank you for pointing that out.  
04:35:56 12 And I'll add -- strike that.

04:35:57 13 You understand that the Wells Fargo application  
04:36:01 14 here still do manual capture, correct?

04:36:05 15 A. Today, yes, that's correct.

04:36:19 16 MR. MELSHEIMER: May I have one moment, Your  
04:36:21 17 Honor?

04:36:21 18 THE COURT: You may.

04:36:54 19 MR. MELSHEIMER: Apologize, Your Honor.

04:37:17 20 Q. (By Mr. Melsheimer) Can you look at Tab 8 of your  
04:37:19 21 exhibit binder, sir?

04:37:20 22 A. I'm there.

04:37:25 23 Q. And this is a -- something called the Futurion Report,  
04:37:34 24 correct? It's been referred to as that?

04:37:36 25 A. Yeah, I pointed out before, this is PX-No. 5.

04:37:39 1 Q. PX-5, and it's called 2007 [sic] Mobile Deposit  
04:37:44 2 Benchmark Report, Consumer Behavioral and Attitudinal  
04:37:48 3 Research; do you see that?

04:37:48 4 A. That's not correct, sir.

04:37:49 5 Q. Consumer Behavioral and Attitudinal Research, it  
04:37:56 6 doesn't say that?

04:37:56 7 A. That part's correct.

04:37:58 8 THE COURT: You said 2007, Mr. Melsheimer.

04:38:00 9 Q. (By Mr. Melsheimer) 2017, I'm sorry, Mr. Calman. 2017  
04:38:05 10 Mobile Deposit Benchmark Report, correct?

04:38:07 11 A. Yes, sir.

04:38:08 12 Q. Consumer Experience Rankings for the Top 15 Financial  
04:38:12 13 Institutions; do you see that?

04:38:12 14 A. Yes, indeed.

04:38:22 15 Q. And what this report does, as I understand your  
04:38:24 16 testimony and in reading it, it ranks 15 different banks'  
04:38:29 17 mobile apps, right?

04:38:30 18 A. This is a benchmark, yes.

04:38:32 19 Q. And from 1 to 15, right?

04:38:36 20 A. I don't recall if there was -- no, that's right. Yes,  
04:38:41 21 it was -- it was a ranking, that's right.

04:38:43 22 Q. 1 is the best, right?

04:38:45 23 A. 1 is the top rated, in this report, you bet.

04:38:49 24 Q. 15 is the lowest rated, right?

04:38:51 25 A. Yes, sir.

04:38:52 1 Q. So let's take a look at the different rankings here.

04:39:06 2 So -- and maybe let's make it easy, sir, by looking at

04:39:25 3 Page 21. Do you see that? Is that the rankings of the

04:39:37 4 various banks in the survey?

04:39:38 5 A. It's titled Detailed Financial Institution Findings.

04:39:42 6 Q. And Wells Fargo is ranked second?

04:39:44 7 A. No. 2.

04:39:44 8 Q. Okay. And BB&T is ranked last, right?

04:39:52 9 A. Yes, indeed.

04:39:53 10 Q. Now, Regions Bank is almost last, they're second to

04:39:57 11 last, right?

04:39:57 12 A. They are.

04:39:58 13 Q. And you know they have auto capture, right?

04:40:00 14 A. You can tell that by they have a green box in the

04:40:04 15 second to the last column with the auto capture function.

04:40:06 16 Q. So you've got a bank near the bottom of the list,

04:40:10 17 Regions, that has auto capture, right, and you've got a

04:40:12 18 bank at No. 2, Wells Fargo, that also has auto capture,

04:40:16 19 right?

04:40:16 20 A. That is correct.

04:40:18 21 Q. Now, if you look at Page 48 of the report, sir, doesn't

04:40:35 22 it talk about the need to maintain manual capture?

04:40:40 23 A. Would you like me to read the whole page, or is there a

04:40:45 24 place you want me to look?

04:40:47 25 Q. Yeah, I'm going to just direct you to Page 48, and I'm

04:40:51 1 going to see if I can find that and display it for the  
04:40:54 2 jury's benefit.

04:41:05 3 MR. MELSHEIMER: Mr. Barnes, can you pull up  
04:41:07 4 Page 48?

04:41:11 5 Q. (By Mr. Melsheimer) Can you see about in the middle of  
04:41:31 6 the page, it's talking about --

04:41:33 7 MR. MELSHEIMER: Let's actually go to Page 47  
04:41:35 8 first so we can see what this is.

04:41:38 9 Q. (By Mr. Melsheimer) So this is a series of --

04:41:39 10 MR. MELSHEIMER: Let's back up one more, if we  
04:41:42 11 could.

04:41:44 12 Q. (By Mr. Melsheimer) This is something called  
04:41:46 13 Definitions, Heuristics. What's that, sir?

04:41:50 14 A. Oh, this describes those different boxes we saw in the  
04:41:54 15 chart.

04:41:54 16 Q. Efficiency of use, clear terminology, match user  
04:41:58 17 expectations, things like that?

04:42:01 18 A. These are the categories that Futurion used in their  
04:42:05 19 surveys, in their rankings we looked at.

04:42:08 20 MR. MELSHEIMER: And if we go to Page 47.

04:42:12 21 Q. (By Mr. Melsheimer) Consistency and Standards,  
04:42:12 22 Hierarchy and Context -- used to take that consistency,  
04:42:16 23 sir. It says: Users should not have to wonder whether  
04:42:20 24 different words, situations, or actions mean the same  
04:42:23 25 thing. Follow platform conventions, right?

04:42:25 1 A. Yeah, you want to -- everywhere you see the same word  
04:42:29 2 you want it to mean the same thing or work the same way.

04:42:31 3 Q. Because that's going to enhance the overall user  
04:42:35 4 satisfaction with the particular application, right?

04:42:37 5 A. It definitely makes the application less difficult to  
04:42:41 6 learn and clearer and more understandable.

04:42:43 7 Q. So if a -- if a screen says, you know, push the button,  
04:42:46 8 you ought to push the button as opposed to doing something  
04:42:49 9 else, right?

04:42:49 10 A. I don't agree with that example, but...

04:42:52 11 Q. Well, users should not have to wonder whether different  
04:42:56 12 words, situations, or actions mean the same thing. Meaning  
04:43:00 13 you ought to make it clear to people how the thing works,  
04:43:03 14 right?

04:43:03 15 A. Yes, or else they're going to have a hard time learning  
04:43:07 16 how to use the app. If a word means something different on  
04:43:10 17 different pages or different activities, that's very  
04:43:14 18 confusing.

04:43:14 19 Q. Exactly. So let's go to Page 48.

04:43:17 20 A. Uh-huh.

04:43:17 21 Q. And 48 --

04:43:19 22 MR. MELSHEIMER: Sorry, back to 47 real quick, to  
04:43:23 23 the bottom of the page.

04:43:24 24 Q. (By Mr. Melsheimer) Hierarchy and Context. The  
04:43:27 25 hierarchy and context should easily funnel the user through

04:43:31 1 their actions in order to reach their desired goal with no  
04:43:34 2 confusion, right?

04:43:34 3 A. You don't want users to get lost.

04:43:37 4 Q. So, for example, the first one is: User must be told  
04:43:39 5 the daily cutoff time for deposits first, clearly displayed  
04:43:43 6 at the beginning of the process, right?

04:43:44 7 A. Well, this was the criteria that Futurion applied when  
04:43:47 8 they did their ratings, that's right.

04:43:48 9 Q. But they were looking to see whether the applications  
04:43:52 10 had these features, right?

04:43:53 11 A. I think that's right.

04:43:56 12 Q. That was one of the things they were grading them on,  
04:44:00 13 on, hey, is it clear to the user when the cutoff time is to  
04:44:05 14 make a deposit?

04:44:05 15 A. Well, yes and no.

04:44:12 16 Q. Let's go to the second one.

04:44:16 17 The help option must be easy to identify. So  
04:44:19 18 that's -- we've all had that situation, right, sir? You're  
04:44:22 19 in a program and you want some help on how to use it. And  
04:44:26 20 the point is, hey, we're going to grade y'all on whether or  
04:44:28 21 not your -- your -- your -- your application makes the help  
04:44:33 22 option easy to identify, right?

04:44:34 23 A. So the grading was at a higher level. I think these  
04:44:39 24 are examples of what they were looking for, but I follow  
04:44:42 25 with what you're saying.



04:44:43 1 Q. Users should be able to choose the account to which  
04:44:47 2 they will deposit before entering the dollar amount.

04:44:52 3 That's another thing they were looking at, right?

04:44:54 4 A. Yeah, I don't really agree with that philosophy, but  
04:44:56 5 that is what they were grading on.

04:44:58 6 Q. This is the Futurion document's grading principle, so  
04:45:00 7 to speak, right?

04:45:02 8 A. It's their rubric, it's their approach.

04:45:05 9 Q. Photo tips should be easy to access?

04:45:09 10 A. That's -- that's the fourth bullet on 48.

04:45:12 11 Q. Okay. And then, finally -- or the last one I want to  
04:45:15 12 mention to you, sir, is the second to the bottom there.

04:45:18 13 Users should be able to manually capture an image of the  
04:45:23 14 front and back of the check and have the app accept such  
04:45:26 15 submissions. Did I read that correctly?

04:45:29 16 A. Yeah, you read that correctly, but as I say, I don't  
04:45:31 17 agree necessarily with all of the philosophy here.

04:45:34 18 Q. Understood, sir. But can we at least agree that that  
04:45:38 19 is describing what we've discussed as manual capture?

04:45:41 20 A. Oh, that is -- yes, it says that exactly. It's manual  
04:45:46 21 capture.

04:45:46 22 Q. And --

04:45:53 23 MR. MELSHEIMER: May I have one moment, Your  
04:45:55 24 Honor?

04:45:55 25 THE COURT: You may.

04:46:29 1 Q. (By Mr. Melsheimer) Mr. Calman, thank you.

04:46:31 2 MR. MELSHEIMER: Pass the witness, Your Honor.

04:46:32 3 THE COURT: All right. Is there redirect,  
04:46:34 4 Ms. Glasser?

04:46:34 5 MS. GLASSER: Yes, Your Honor.

04:46:35 6 MR. MELSHEIMER: Just give me a second here.

04:46:45 7 THE COURT: If neither of you counsel are going to  
04:46:47 8 continue to use this easel, let's put it back where it was,  
04:46:49 9 so it doesn't block that pathway, please?

04:46:53 10 MR. MELSHEIMER: I will do that right now,  
04:46:55 11 Your Honor, with the Court's permission.

04:46:56 12 THE COURT: That will be fine.

04:47:10 13 All right. Counsel, you may proceed with  
04:47:13 14 redirect.

04:47:13 15 MS. GLASSER: Thank you, Your Honor.

04:47:13 16 REDIRECT EXAMINATION

04:47:13 17 BY MS. GLASSER:

04:47:16 18 Q. Did opposing counsel ask any questions at all about  
04:47:20 19 your methodology for calculating the error free rates?

04:47:25 20 A. I don't remember any questions about that.

04:47:28 21 Q. All right. Let's turn to a topic that he did ask you  
04:47:31 22 about.

04:47:32 23 MS. GLASSER: Could we have on the screen  
04:47:34 24 Paragraph 390 from your report? And actually if you could  
04:47:42 25 continue on to the next page, please, the paragraph

04:47:45 1 continues with that chart.

04:47:47 2 Q. (By Ms. Glasser) Is this a larger, more detailed  
04:47:49 3 version of the chart from --

04:47:51 4 MS. GLASSER: Actually go to the second part,  
04:47:53 5 sorry. Thanks so much. It's a long paragraph.

04:47:56 6 Q. (By Ms. Glasser) Is this a longer and more detailed  
04:47:58 7 version of the chart that Mr. Melsheimer showed you from  
04:48:00 8 Paragraph 515?

04:48:01 9 A. Yes.

04:48:06 10 Q. All right. And as you discussed with opposing counsel,  
04:48:09 11 the rates go up year to year, correct?

04:48:11 12 A. Yes, indeed.

04:48:14 13 Q. Could you explain for us how the trend from 2012  
04:48:20 14 through to 2018 supports your opinions regarding the  
04:48:24 15 fundamental nature of auto capture?

04:48:25 16 A. Sure. So, I mean, we pointed out that that first year  
04:48:29 17 the yellow line exceeded even the high estimate by 25  
04:48:33 18 percent. So it was bigger. It was more -- as I said when  
04:48:36 19 we talked earlier, it was more successful than even  
04:48:39 20 anticipated.

04:48:40 21 Now, once auto capture came along, it wasn't just  
04:48:45 22 a 25 percent boost; now it was 50, 75. As I recall when  
04:48:51 23 you get to the end, it's something like 250 percent higher  
04:48:54 24 than the highest expectation once auto capture was part of  
04:48:59 25 the game.

04:48:59 1 So, yes, Wells Fargo underestimated, and in 2013,  
04:49:07 2 that was, you know, by 25 percent. But that 25 percent  
04:49:10 3 just got bigger and bigger and bigger once auto capture was  
04:49:14 4 available.

04:49:14 5 Q. When we look at the actual volumes from, say, the year  
04:49:20 6 2017, the year of the Futurion Report, in your opinion,  
04:49:23 7 could those levels have been sustainable without auto  
04:49:27 8 capture?

04:49:27 9 A. No, ma'am.

04:49:28 10 Q. Why is that?

04:49:29 11 A. Well, at scale, manual capture just creates too many  
04:49:35 12 errors. There's too much rework and there's too much  
04:49:39 13 expense going on when you're now doing -- we're talking  
04:49:43 14 2017, 61 million, 61-and-a-half million deposits. If 30  
04:49:49 15 percent of those have problems, that's just -- that's too  
04:49:52 16 much. It's not sustainable.

04:49:53 17 Q. Thank you very much, sir.

04:49:55 18 THE COURT: You pass the witness, counsel?

04:49:57 19 MS. GLASSER: Pass the witness, thank you.

04:49:59 20 THE COURT: Is there additional cross,  
04:50:00 21 Mr. Melsheimer?

04:50:01 22 MR. MELSHEIMER: There's not, Your Honor.

04:50:02 23 THE COURT: All right. You may step down,  
04:50:04 24 Mr. Calman.

04:50:11 25 Counsel, approach the bench, please.

04:50:12 1 (Bench conference.)

04:50:23 2 THE COURT: Plaintiff, who is your next witness?

04:50:26 3 MR. BUNT: Mr. Weinstein.

04:50:27 4 THE COURT: And you're going to put on the direct?

04:50:30 5 MR. BUNT: Yes, Your Honor.

04:50:30 6 THE COURT: What's your estimate of time for the

04:50:32 7 direct?

04:50:32 8 MR. BUNT: About 45 to 50 minutes.

04:50:36 9 THE COURT: Who's going to cross him?

04:50:37 10 MR. MELSHEIMER: Wes Hill.

04:50:39 11 THE COURT: Do you have any idea what his planned

04:50:42 12 cross is?

04:50:42 13 MR. MELSHEIMER: About an hour.

04:50:44 14 THE COURT: After Weinstein, what does the

04:50:47 15 Plaintiff have?

04:50:47 16 MR. SHEASBY: We have some depo clips, Your Honor.

04:50:51 17 MR. MELSHEIMER: 20 minutes.

04:50:54 18 MR. SHEASBY: Then we rest.

04:50:54 19 THE COURT: Okay.

04:50:54 20 MR. SHEASBY: I will say, on behalf of

04:50:56 21 Mr. Melsheimer, I think we're way ahead. I think this is

04:50:59 22 going to go to the jury on Tuesday based on -- based on

04:51:02 23 where we're at.

04:51:03 24 THE COURT: You're more optimistic than I am,

04:51:06 25 especially given the disagreements I've seen so far. When

04:51:09 1 we get to the charge, I don't expect it to go very fast at  
04:51:13 2 all.

04:51:13 3 MR. MELSHEIMER: If you were in a Halloween mood,  
04:51:16 4 though, Judge, you could let the people go trick or  
04:51:19 5 treating earlier. But we're prepared to go. We're not  
04:51:22 6 going to run out of stuff today, even if you go to 6:00  
04:51:25 7 o'clock.

04:51:25 8 THE COURT: I would like to see if we can time it  
04:51:28 9 so that the Plaintiff rests at the time I have to go to  
04:51:31 10 Tyler tomorrow and that we have an even break. And then  
04:51:34 11 the Defendant can start Monday with their case-in-chief.

04:51:36 12 MR. MELSHEIMER: I don't think there's any --  
04:51:39 13 well, hard to know, as you know. I've been wrong on many  
04:51:43 14 of my predictions, but I think that we will go into  
04:51:46 15 tomorrow morning with the Plaintiff's case. Whether we go  
04:51:50 16 all the way to noon, that's what I don't know.

04:51:55 17 THE COURT: All right. This just was an estimate,  
04:51:56 18 and I appreciate the input.

04:51:58 19 Let's go ahead and put his direct on.

04:52:00 20 MR. MELSHEIMER: Will we be doing the cross, as  
04:52:02 21 well, today, Your Honor, do you think?

04:52:05 22 THE COURT: I don't know.

04:52:05 23 MR. MELSHEIMER: Okay. Thank you.

04:52:07 24 (Bench conference concluded.)

04:52:10 25 MR. SHEASBY: Your Honor, with permission, may I

04:52:11 1 clear binders and --

04:52:13 2 THE COURT: Yes, please do.

04:52:22 3 While that's going on, Plaintiff, call your next  
04:52:25 4 witness.

04:52:27 5 MR. BUNT: Your Honor, we'd call Mr. Roy  
04:52:33 6 Weinstein.

04:52:33 7 THE COURT: If you'd come forward and be sworn,  
04:52:35 8 Mr. Weinstein.

04:52:43 9 (Witness sworn.)

04:52:44 10 THE COURT: Please have a seat on the witness  
04:52:58 11 stand, sir.

04:53:18 12 MR. BUNT: May it please the Court.

04:53:19 13 THE COURT: You may proceed, Mr. Bunt.

04:53:21 14 MR. BUNT: Thank you, Your Honor.

04:53:21 15 ROY WEINSTEIN, PLAINTIFF'S WITNESS, SWORN

04:53:21 16 DIRECT EXAMINATION

04:53:22 17 BY MR. BUNT:

04:53:22 18 Q. Please state your name for the jury.

04:53:24 19 A. Roy Weinstein.

04:53:25 20 Q. And can you tell the jury a little bit about yourself?

04:53:28 21 A. I'm an economist. I live in Los Angeles, California.  
04:53:33 22 I'm married with two grown children and one grandchild.

04:53:37 23 Q. And what do you do in California?

04:53:39 24 A. I'm a managing director at an economic research and  
04:53:45 25 consulting firm called Micronomics, which I co-founded back

04:53:50 1 in 1988.

04:53:50 2 Q. And why are you here today, Mr. Weinstein?

04:53:53 3 A. I'm here to talk about damages adequate to compensate

04:53:59 4 USAA for infringement of the patents-in-suit by Wells

04:54:05 5 Fargo.

04:54:05 6 Q. Mr. Weinstein, we'll want to go over your analysis in

04:54:09 7 greater detail in a moment, but can you first provide the

04:54:12 8 jury with your conclusion as to the damages owed by Wells

04:54:15 9 Fargo to USAA?

04:54:16 10 A. Yes. I have concluded that damages adequate to

04:54:21 11 compensate for infringement of the two patents-in-suit for

04:54:25 12 the period December 15th, 2016, until November 4th, 2019,

04:54:32 13 are \$299,757,000.00.

04:54:38 14 Q. And can you summarize at a very high level how you

04:54:40 15 calculated those figures?

04:54:42 16 A. Yes. There are three steps to my calculation in -- in

04:54:51 17 summary.

04:54:53 18 First, I calculated the benefits obtained by

04:54:59 19 Wells Fargo in connection with its use of auto capture MRDC

04:55:06 20 during the damage period. That's December of 2016 to

04:55:12 21 November 2019. That was the first step.

04:55:16 22 The second step was to apportion those benefits

04:55:21 23 down just to the contribution of the two patents-in-suit.

04:55:26 24 And so that apportionment produced the second number here,

04:55:32 25 approximately \$373 million, which reflects the contribution



04:55:38 1 of the patents-in-suit to auto capture MRDC.

04:55:44 2           The final step was to decide how that split should  
04:55:49 3 be made with respect to the \$373 million as between Wells  
04:55:57 4 Fargo and USAA. And that final step produced my ultimate  
04:56:03 5 answer of \$299 million to USAA in connection with the  
04:56:10 6 inventions, and the balance to Wells Fargo. And that is  
04:56:16 7 based on Wells Fargo return on equity at roughly the damage  
04:56:21 8 period time.

04:56:23 9 Q. And what is it that enables you to be able to come up  
04:56:27 10 with that figure?

04:56:27 11 A. Well, I'm an economist. And as an economist, I have  
04:56:35 12 academic training in accounting and finance and those kinds  
04:56:38 13 of issues.

04:56:39 14           But the other thing I would say is that one of the  
04:56:43 15 prime subjects that economists study is -- is values in the  
04:56:48 16 market -- that's roughly the fourth checkmark on this  
04:56:51 17 chart -- how prices are determined, how products such as  
04:56:58 18 intellectual property are valued in the market, the use of  
04:57:03 19 benchmarks in order to measure values.

04:57:08 20           And so in -- in -- in reaching my conclusions  
04:57:12 21 here, I rely on my training as an economist and my  
04:57:14 22 experience over the years.

04:57:18 23 Q. Mr. Weinstein, is your firm being compensated for the  
04:57:21 24 work you've done on this case?

04:57:23 25 A. Yes, the firm that I work for, Micronomics, receives

04:57:26 1 compensation for my time at the rate of \$750.00 per hour.

04:57:30 2 Q. Is it routine for experts like yourself and Wells

04:57:34 3 Fargo's experts to be compensated for the time spent

04:57:37 4 analyzing problems like this?

04:57:39 5 A. Yes, sir.

04:57:39 6 Q. Could you tell the jury about your educational

04:57:43 7 background?

04:57:43 8 A. Yes. I attended the Baruch College of City University

04:57:52 9 of New York and graduated with a Bachelor of Business

04:57:56 10 Administration degree back in 1964 with honors, in

04:58:00 11 economics.

04:58:00 12 From there, I went to the University of Chicago

04:58:03 13 and received a Master of Arts degree, also in economics.

04:58:06 14 Q. Did you receive any honors and awards in connection

04:58:09 15 with your education?

04:58:11 16 A. Yes, sir, I did. If you go to the next slide, I had --

04:58:14 17 I had some awards at City College in connection with

04:58:19 18 academic performance. And then at the University of

04:58:22 19 Chicago I received fellowships from Walgreen Foundation and

04:58:26 20 the U.S. Public Health Service.

04:58:28 21 Q. And have you been honored, since leaving school, for

04:58:33 22 your work as a professional economist?

04:58:35 23 A. I have. Roughly 10 years ago I received what was

04:58:39 24 called the Career Achievement Award from the Business and

04:58:42 25 Economics Alumni Society at City College. I was the first

04:58:47 1 recipient of that award, and I think there's been one  
04:58:50 2 other.

04:58:50 3 Q. Can you tell the jury some of the consulting clients  
04:58:53 4 you've had over the course of your career?

04:58:56 5 A. Yes. Over my career, I've been engaged by companies  
04:59:01 6 like eBay, Intel, Dell Computer, Halliburton. In Los  
04:59:08 7 Angeles, by the Rose Bowl Committee in connection with the  
04:59:11 8 Rose Parade and the Rose Bowl to try and determine the  
04:59:12 9 economic impact of those events on the surrounding  
04:59:16 10 community. So I've had lots of interesting clients over  
04:59:19 11 the years.

04:59:19 12 Q. Have you written or spoken about some of the work  
04:59:22 13 you've done related to the subjects of patents and patent  
04:59:25 14 damages, in the past?

04:59:26 15 A. Yes, sir, I have. The first article that I published  
04:59:31 16 on the subject of patent damages was one that I prepared  
04:59:35 17 back in 1988. And it was published in the Journal of the  
04:59:42 18 Patent and Trademark Office Society. I subsequently  
04:59:45 19 published articles in the Journal of Law & Technology and  
04:59:48 20 the Federal Bar Circuit Journal.

04:59:52 21 Q. And have you ever taught or given lectures on  
04:59:52 22 determining the amount that should be paid for patent  
04:59:59 23 infringement?

04:59:59 24 A. Yes. Over the years, I've been invited from time to  
05:00:04 25 time to speak on the subject of how patent damages are

05:00:07 1 calculated and issues associated with those kinds of  
05:00:11 2 calculations. I've appeared before technologists in  
05:00:14 3 Washington, D.C., on that subject and several times at an  
05:00:16 4 annual conference held every November in Plano, Texas.

05:00:21 5 MR. BUNT: Your Honor, at this time, we would  
05:00:22 6 offer Mr. Roy Weinstein as an expert on the valuation of  
05:00:27 7 intellectual property and the calculation of patent  
05:00:29 8 damages.

05:00:29 9 THE COURT: Is there objection?

05:00:31 10 MR. HILL: No objection, Your Honor.

05:00:32 11 THE COURT: The Court will recognize this witness  
05:00:33 12 as an expert in those designated fields.

05:00:35 13 Proceed.

05:00:37 14 MR. BUNT: Thank you, Your Honor.

05:00:37 15 Q. (By Mr. Bunt) So, Mr. Weinstein, what materials did  
05:00:39 16 you consider in reaching your conclusions in this case?

05:00:42 17 A. So I had -- I had access to three types of materials.  
05:00:48 18 There were documents produced by USAA, documents produced  
05:00:52 19 by Wells Fargo, and then other materials, which I gathered  
05:00:56 20 on my own, at Micronomics.

05:00:59 21 And so in order to do the work that -- that I'll  
05:01:02 22 be describing today, I had access to all those different  
05:01:06 23 kinds of -- different kinds of materials and documents and  
05:01:09 24 testimony.

05:01:10 25 Q. What's your understanding of why patent rights are

05:01:14 1 important in the United States?

05:01:17 2 A. Well, patent rights are extremely important in -- in  
05:01:22 3 our country for the following reason: By granting a  
05:01:32 4 patent, what the government is doing is giving the  
05:01:35 5 inventor, the patent owner, the rights to exclude anyone  
05:01:38 6 else from using the invention without permission. That's  
05:01:42 7 what it means to have a patent.

05:01:44 8 And so if -- if -- if an entity invents something,  
05:01:48 9 it has the sole right to use that unless it chooses to give  
05:01:53 10 permission to someone else to use that patent.

05:01:59 11 And the idea here is to encourage innovation that  
05:02:04 12 leads to inventions that can be used by the entities that  
05:02:07 13 want permission to use them, as well as by consumers that  
05:02:12 14 benefit ultimately from -- from those inventions and those  
05:02:16 15 patents.

05:02:17 16 Q. Is there a name for the agreements that are sometimes  
05:02:20 17 reached between patentholders and entities that wish to  
05:02:23 18 have access to their patents?

05:02:25 19 A. Yes, sir, there is. Those are called license  
05:02:29 20 agreements.

05:02:29 21 Q. And, typically, do those license agreements include  
05:02:33 22 payment terms?

05:02:33 23 A. They do. And -- and the idea here is that the  
05:02:37 24 inventor, the patentholder, gives permission to use its  
05:02:44 25 invention in exchange for payment.

05:02:46 1 Q. How do these license agreements come into existence?

05:02:49 2 A. Typically, they come into existence through  
05:02:52 3 negotiations. If -- if someone has an invention and  
05:02:55 4 someone else wants to use it, typically, what they do is  
05:02:59 5 sit down across the table and negotiate for that  
05:03:04 6 permission.

05:03:05 7 And the idea is, obviously, the patentholder would  
05:03:08 8 like to get as much as it can for the invention. And  
05:03:13 9 the -- the licensee, the entity that wants permission,  
05:03:18 10 would like to pay as little as possible. So it's a  
05:03:21 11 negotiation. And they wind up someplace, if they can, with  
05:03:25 12 a patent license.

05:03:27 13 Q. In connection with your work in this case, how did you  
05:03:30 14 go about determining what constitutes fair compensation to  
05:03:34 15 USAA for use of the patents-in-suit?

05:03:36 16 A. Well, I began with the patent statute, and the relevant  
05:03:44 17 portion of that statute is shown here. And what the  
05:03:47 18 statute says is that if there's a finding of infringement,  
05:03:55 19 the patentholder is entitled under that statute to  
05:04:01 20 compensation that in no event is less than a reasonable  
05:04:06 21 royalty for use made of the invention by the infringer.

05:04:14 22 So if I could paraphrase that very quickly. The  
05:04:17 23 payment that's to be made for infringement is to be based  
05:04:20 24 on the use made by the infringer for the patents. That's  
05:04:25 25 what the statute says.

05:04:26 1 Q. And how does one determine damages adequate to  
05:04:30 2 compensate for infringement?

05:04:32 3 A. Well, that's -- that's actually an interesting  
05:04:37 4 question. And here's how it's done in this kind of  
05:04:41 5 situation.

05:04:41 6 What you do is you put the parties together, and  
05:04:44 7 that's what's depicted on this slide, and you have them  
05:04:47 8 conduct what's called a hypothetical negotiation. It's  
05:04:50 9 called a hypothetical negotiation because it didn't  
05:04:53 10 actually happen. And so it's hypothetical. But what you  
05:04:58 11 do is you have them negotiate on -- for permission to use  
05:05:04 12 the technology.

05:05:05 13 And so what we see here is USAA on one side of  
05:05:09 14 this negotiating table, and it's offering the patented  
05:05:13 15 technology to Wells Fargo -- that's why the arrow goes that  
05:05:17 16 way -- in exchange for payment by Wells Fargo for use of  
05:05:23 17 that technology. And that's how that hypothetical  
05:05:26 18 negotiation takes place. Again, it's called hypothetical  
05:05:28 19 because it didn't happen, which is why we're here today.

05:05:31 20 And the timing of -- of this hypothetical  
05:05:38 21 negotiation is back before infringement began. And so in  
05:05:42 22 this case, it's March 2015. And so if you think about  
05:05:45 23 that, it's a hypothetical negotiation between the parties  
05:05:49 24 for permission to use the technology in exchange for  
05:05:52 25 payment at the time of infringement.

05:05:55 1 Q. And does the question of whether Wells Fargo was  
05:05:58 2 willfully infringing the patents come into play?

05:06:01 3 A. No. That has -- that has nothing to do with it,  
05:06:04 4 whether or not they -- it was -- it was infringement that  
05:06:08 5 was intentional or infringement that was by accident makes  
05:06:13 6 no difference. The idea here is to have this hypothetical  
05:06:19 7 negotiation for rights to use the patent based on use made  
05:06:24 8 by Wells Fargo of the patent.

05:06:27 9 Q. Are there certain assumptions that economists have to  
05:06:31 10 make for purposes of this hypothetical negotiation?

05:06:33 11 A. Yes, sir, there are.

05:06:35 12 Q. And what are those?

05:06:37 13 A. And this -- this is another interesting part about this  
05:06:42 14 hypothetical negotiation.

05:06:43 15 Both parties sitting at this negotiating table  
05:06:47 16 agree that the patents are valid, that they are infringed,  
05:06:51 17 and that they are enforceable. They also understand the  
05:06:55 18 need to reach an agreement that is -- at this hypothetical  
05:07:01 19 negotiation neither side can get up and leave the table.  
05:07:02 20 They have to get to the finish line and reach an agreement.

05:07:06 21 And the third aspect of this is something that's  
05:07:10 22 very different from a real-world negotiation, which is  
05:07:14 23 they -- they both understand the importance of the patents.  
05:07:20 24 Back in March -- in 2015 at the time that the hypothetical  
05:07:25 25 negotiation -- May of 2015, they haven't, in a sense they



05:07:31 1 have insight into the future importance of the patents,  
05:07:35 2 and -- and they know it back then. And that's information  
05:07:37 3 that's available to them at this hypothetical negotiation.

05:07:41 4 Q. Are these assumptions different from a real-world  
05:07:44 5 negotiation?

05:07:44 6 A. Yes, they are. Obviously, in a real-world negotiation,  
05:07:51 7 typically, the parties will negotiate about everything.  
05:07:53 8 There may not be agreement about whether the patents are  
05:07:56 9 valid or can be enforced or whether they're infringed. And  
05:07:59 10 certainly in a real-world negotiation, there's -- there's  
05:08:03 11 not as much information about the future as there is in  
05:08:07 12 this hypothetical negotiation.

05:08:09 13 But in the hypothetical negotiation, that -- that  
05:08:12 14 first bullet point there about validity, infringement, and  
05:08:15 15 enforceability, is off the table. Both sides agree about  
05:08:19 16 that for purposes of this framework, and they also have  
05:08:24 17 this information about the ultimate value of the patents,  
05:08:31 18 that is, the actual use made by Wells Fargo in this case  
05:08:34 19 about the patents, even though the negotiation is before  
05:08:36 20 that use takes place.

05:08:37 21 Q. Now, you just identified certain assumptions that are  
05:08:42 22 made as a part of the hypothetical negotiation. Is there  
05:08:44 23 anything else that you relied upon in forming your opinions  
05:08:49 24 in this case?

05:08:49 25 A. Yes. So to reach my conclusions, I relied on, I guess,

05:08:53 1 two more things. One is my training and experience in this  
05:08:57 2 area having written and spoken about it for many years,  
05:09:01 3 plus my training as an economist. And the other thing that  
05:09:06 4 I rely on is something that I'll get to very shortly in my  
05:09:10 5 testimony, which is referred to as the Georgia-Pacific  
05:09:12 6 factors.

05:09:13 7 Q. Okay. So did -- did Wells -- did USAA ask Wells Fargo  
05:09:20 8 to license the remote deposit capture patents in this suit?

05:09:27 9 MR. BUNT: If we can go to the next slide.

05:09:29 10 A. Yes, sir. So there actually was a real-world effort on  
05:09:32 11 the part of USAA to obtain a license agreement with Wells  
05:09:39 12 Fargo.

05:09:39 13 And what's on the screen now is a -- an email from  
05:09:45 14 Ron Epstein, who represented USAA at the time in connection  
05:09:47 15 with its licensing efforts, to individuals at Wells Fargo.  
05:09:53 16 And this email is dated August of 2017. And the snippet  
05:09:58 17 that's on the screen references an effort to -- to license  
05:10:10 18 USSA's -- USAA's technology to Wells Fargo back then.

05:10:16 19 Q. (By Mr. Bunt) Now, Mr. Weinstein, is mobile deposit,  
05:10:19 20 which we've been referring to as MRDC, important to Wells  
05:10:25 21 Fargo?

05:10:25 22 A. I believe it is.

05:10:26 23 Q. How do you know it's important to Wells Fargo?

05:10:29 24 A. Well, I've been here for the trial and I heard the  
05:10:29 25 testimony. I've also had an opportunity to look at the

05:10:34 1 documents that I referenced before. And there also are  
05:10:40 2 quotations that I've had a chance to read in preparing  
05:10:44 3 prior to today, and this is one from a Wells Fargo senior  
05:10:50 4 vice president.

05:10:50 5           It's not -- it's not a direct quote, but it's a  
05:10:55 6 paraphrase of his testimony wherein he talks about mobile  
05:11:05 7 remote deposit capture as a table stakes capability. And  
05:11:10 8 what table stakes means in this context is, if you're going  
05:11:14 9 to be in this space, you have to have it. If you're going  
05:11:18 10 to be doing it, you have to have this functionality.

05:11:20 11 Q. Now, to be clear, is this lawsuit over MRDC, generally?

05:11:24 12 A. No. The lawsuit is about MRDC, but the focus of my  
05:11:29 13 damages analysis is in connection with the auto capture  
05:11:33 14 feature, the auto capture functionality.

05:11:36 15 Q. And is this auto-capture-enabled MRDC important to  
05:11:43 16 Wells Fargo?

05:11:43 17 A. Yes, sir, it is.

05:11:44 18 Q. What evidence have you seen of the importance of the  
05:11:47 19 auto-capture-enabled MRDC to Wells Fargo?

05:11:50 20 A. Well, this is a snippet of testimony, sworn testimony  
05:11:57 21 by Mr. Saffici, who we've heard about before in this case.  
05:12:02 22 And his -- the question and answer essentially stands for  
05:12:07 23 the proposition that auto capture is widely accepted as the  
05:12:12 24 foundation for successful MRDC.

05:12:17 25 Q. And Mr. Saffici is one of Wells Fargo's experts?

05:12:20 1 A. He's -- he's -- he was at one time, for sure, yes.

05:12:23 2 Q. And did you find any evidence that Wells Fargo views  
05:12:27 3 auto capture as essential?

05:12:29 4 A. Yes, sir.

05:12:30 5 Q. And what did you find?

05:12:32 6 A. So this is more testimony from Mr. Ajami, who's a Wells  
05:12:37 7 Fargo senior vice president, and he has no factual basis to  
05:12:42 8 disagree with the statement that auto capture is a  
05:12:47 9 must-have feature. That's the top part of this slide.

05:12:51 10 And the bottom part is the -- from the Futurion  
05:12:56 11 study in 2017 that we've seen before in this case, which  
05:13:00 12 says that auto capture must now be treated as a must-have  
05:13:05 13 feature across the financial services industry. So it's  
05:13:09 14 not -- it's not just banks like Wells Fargo. It's other  
05:13:16 15 banks and it's financial services generally speaking.

05:13:20 16 Q. And the Plaintiff's exhibit on this, the Futurion  
05:13:23 17 document at the bottom, is that PX-005?

05:13:25 18 A. Yes, sir.

05:13:26 19 Q. And what conclusion have you reached as to the  
05:13:28 20 importance of auto capture?

05:13:29 21 A. I've concluded that auto capture is essential for an  
05:13:35 22 essential MRDC functionality.

05:13:39 23 Q. So how did you go about calculating damages in this  
05:13:43 24 case?

05:13:43 25 A. All right. So now, I used what are called the

05:13:49 1 Georgia-Pacific factors.

05:13:50 2 Q. And what are those Georgia-Pacific factors?

05:13:53 3 A. They can be thought of as a checklist. It's a  
05:13:56 4 checklist of things to consider in determining the -- the  
05:14:00 5 value of the patents to the infringer, because, remember,  
05:14:04 6 the statute contemplates benefits, use made by the  
05:14:11 7 infringer of the patented technology.

05:14:14 8 And so Georgia -- the Georgia-Pacific factors come  
05:14:18 9 from a former patent damage case, litigation case, and --  
05:14:22 10 and -- and the Court in that case offered this checklist of  
05:14:25 11 15 factors which the parties sitting at that negotiating  
05:14:29 12 table having this hypothetical negotiation might think  
05:14:32 13 about. And the idea is if you have this checklist, it will  
05:14:38 14 help you get to the right answer.

05:14:40 15 Q. And are these Georgia-Pacific factors and the patent  
05:14:47 16 statute that you showed the jury and the hypothetical  
05:14:50 17 negotiation, are those used both by yourself and by Wells  
05:14:53 18 Fargo's damage expert in this case?

05:14:54 19 A. Yes, sir, we both have the identical framework.

05:14:57 20 Q. And did you consider all 15 of these factors in  
05:15:00 21 developing your reasonable royalty measure of damages?

05:15:03 22 A. I did. That said, in every case, some factors are --  
05:15:10 23 turn out to be more important than others because some are  
05:15:13 24 relevant in certain situations and not in others.

05:15:16 25 But I considered all 15, and we'll focus on those

05:15:22 1 that I found to be most relevant here.

05:15:24 2 Q. So where did you begin?

05:15:25 3 A. In this case, I began with Georgia-Pacific Factors 9  
05:15:30 4 and 10, and I combined them because they both really talk  
05:15:33 5 about the same thing. They talk about that the benefits  
05:15:39 6 and the advantages of the patents and in the context of  
05:15:42 7 what those benefits are in this case to Wells Fargo.

05:15:48 8 Q. Why did you start with those factors?

05:15:49 9 A. Well, if you're going to talk about the value of an  
05:15:55 10 invention, one of the things that would be important to  
05:15:57 11 know is how does that invention benefit the entity that's  
05:16:02 12 taking the license in this case?

05:16:06 13 If Wells Fargo is going to be required to pay for  
05:16:10 14 using this technology, a good starting point in this  
05:16:15 15 particular case is to examine the uses and the benefits  
05:16:20 16 from those uses that Wells Fargo obtained, because the  
05:16:26 17 payments are going to have to be based at some level on  
05:16:29 18 that.

05:16:30 19 Q. So what benefits did you find?

05:16:33 20 A. Well, I found basically three kinds of benefits to  
05:16:41 21 Wells Fargo. And so in reaching my conclusion about  
05:16:44 22 damages adequate to compensate for infringement, I thought  
05:16:50 23 about what actual benefits did Wells Fargo get from using  
05:16:54 24 those patents-in-suit, and there were three types.

05:16:57 25 They relate to cost savings that Wells Fargo

05:17:01 1 itself experienced by using these patents, also increased  
05:17:07 2 profits that Wells Fargo obtained by using these patents,  
05:17:12 3 and, finally, ecosystem benefits which relate to the brand  
05:17:18 4 name and reputation value to Wells Fargo of having access  
05:17:22 5 to this technology.

05:17:23 6 Q. Can you describe each of those benefits to the jury?

05:17:26 7 A. Sure. And I can do that fairly quickly.

05:17:28 8           The cost-savings benefits relate to the fact that  
05:17:32 9 it costs Wells Fargo less money to process a mobile deposit  
05:17:39 10 than it does to process a deposit made with a teller at a  
05:17:44 11 bank or at an ATM.

05:17:46 12           And so a mobile deposit allows Wells Fargo to save  
05:17:50 13 money. They're a cost-savings benefits.

05:17:54 14           In addition -- in addition, the availability of  
05:17:59 15 successful mobile deposit program allows Wells Fargo to not  
05:18:06 16 have as many bank branches as it otherwise would need. And  
05:18:10 17 since it costs money to build and maintain bank branches,  
05:18:14 18 Wells Fargo saves money by virtue of the fact that  
05:18:17 19 consumers use mobile deposits with auto capture. That's  
05:18:21 20 the cost-savings benefit.

05:18:22 21           The second benefit has to do with increased  
05:18:26 22 profits. Wells Fargo makes more money on mobile deposits  
05:18:31 23 than it does on other kinds of deposits. And so it  
05:18:34 24 receives a benefit when consumers make mobile deposits.

05:18:38 25           And the third are these ecosystem benefits, which

05:18:44 1 Wells Fargo recognizes are associated with having a  
05:18:46 2 successful mobile deposit program.

05:18:51 3 And so in deciding what those -- what the benefits  
05:18:54 4 are, I looked at all three of those areas and ultimately  
05:19:00 5 quantified them, because as the statute says, damages  
05:19:05 6 should be related to use made of the invention by the  
05:19:13 7 infringer.

05:19:13 8 Q. And do these three benefits, these three categories of  
05:19:16 9 benefits, overlap?

05:19:17 10 A. No, they're separate. They don't overlap.

05:19:20 11 Q. Now, will you be telling the jury about the benefits of  
05:19:23 12 MRDC, generally?

05:19:24 13 A. Yes, sir, I will. What I do is I will start with the  
05:19:30 14 benefits of MRDC, generally, generally. But since my  
05:19:37 15 understanding and conclusion is that auto capture is  
05:19:42 16 essential, table stakes, with respect to the successful  
05:19:47 17 operation of MRDC, I will then apportion down from the MRDC  
05:19:53 18 benefits to the contribution of auto capture to creating  
05:20:00 19 those benefits so that damages are limited to the  
05:20:06 20 contribution made by the patents.

05:20:09 21 Q. So let's start with cost savings and go to the next  
05:20:14 22 slide.

05:20:15 23 What evidence have you seen regarding the  
05:20:17 24 cost-savings benefits of the patents-in-suit to Wells  
05:20:19 25 Fargo?



05:20:19 1 A. This next slide relates to that first bullet point I  
05:20:24 2 was talking about, cost savings. It's a 2011 Wells Fargo  
05:20:29 3 planning document, PX-415.

05:20:32 4 So, at that time, in this planning document at  
05:20:36 5 Wells Fargo, it says within it: The key benefits to  
05:20:43 6 Wells Fargo include cost savings from moving deposits out  
05:20:47 7 of the store -- the store in this context is the bank --  
05:20:52 8 out of the bank and out of ATM channels.

05:20:55 9 And so Wells Fargo, back in 2011, recognized that  
05:21:04 10 mobile remote deposit capture -- you can see that right  
05:21:07 11 on the -- toward the top of the document itself -- would  
05:21:09 12 provide those key benefits to Wells Fargo.

05:21:14 13 Q. And did Wells Fargo study the potential impact of MRDC  
05:21:18 14 on its costs?

05:21:19 15 A. It did. This is November 2010. Again, it's -- it's  
05:21:25 16 around the same period. And you'll notice at the top, it  
05:21:29 17 says: MRDC offers Wells Fargo a lower cost channel for  
05:21:35 18 deposits.

05:21:36 19 It's talking about the same thing that I've been  
05:21:37 20 referencing. It costs Wells Fargo less money -- less money  
05:21:44 21 to process a mobile deposit than an ATM deposit or a  
05:21:47 22 deposit with a teller.

05:21:49 23 And what this document says is, MRDC has the  
05:21:52 24 potential to produce \$99 million in savings over the next  
05:21:55 25 three years -- just three years, \$99 million in those kinds

05:22:00 1 of benefits.

05:22:01 2 Q. And that document is PX-1069; is that correct?

05:22:04 3 A. Yes, sir.

05:22:05 4 Q. What other kinds of cost savings have you seen?

05:22:07 5 A. The second part of the cost savings bullet that I  
05:22:12 6 identified had to do with fewer branches and the savings  
05:22:16 7 that's associated with -- with not needing as many branches  
05:22:19 8 to process deposits.

05:22:21 9 So this is a 2015 Bank of America document, and it  
05:22:24 10 says that its customers deposit 250,000 checks per day  
05:22:32 11 through their mobile devices and that the Bank of America  
05:22:36 12 would need an additional 650 banks to handle that kind of  
05:22:43 13 deposit activity.

05:22:44 14 Q. Now, that's Bank of America.

05:22:46 15 Can you tell the jury the number of mobile  
05:22:49 16 deposits each day that Bank -- that Wells Fargo has in  
05:22:52 17 comparison to Bank of America?

05:22:54 18 A. Yes. Wells Fargo has approximately 220,000 mobile  
05:22:58 19 deposits a day, and I was able to calculate that number  
05:23:01 20 from data produced to me by -- by Wells Fargo.

05:23:03 21 So they -- they both process an extraordinary  
05:23:09 22 number of mobile deposits each day.

05:23:12 23 Q. And that's PX-1003; is that correct?

05:23:15 24 A. Yes, sir.

05:23:15 25 Q. Now, you touched on the cost-savings benefits of the

05:23:21 1 patents-in-suit. What was the next category of benefits  
05:23:23 2 that you considered?

05:23:24 3 A. So the second category has to do with these increased  
05:23:29 4 profits, and the point here is that Wells Fargo recognized  
05:23:32 5 that it makes more money on mobile deposits than it does on  
05:23:35 6 other kinds of deposits.

05:23:37 7 Q. What evidence did you see regarding increased profits  
05:23:41 8 from Wells Fargo's use of the accused MRDC app?

05:23:44 9 A. So this slide, which I believe reflects something that  
05:23:54 10 Wells Fargo was aware of in around 2012, is the results of  
05:23:57 11 a survey and a pilot study that Wells Fargo conducted.

05:24:00 12 And on the right, you can see that the conclusion  
05:24:02 13 is that MRDC customers are about 45 percent more profitable  
05:24:09 14 on an annualized basis to -- to Wells Fargo than customers  
05:24:14 15 who don't make mobile deposits but actually have the app  
05:24:18 16 anyway.

05:24:19 17 And you can see that by looking at the height of  
05:24:22 18 the bar on the right. It's about \$217.50. That's for MRDC  
05:24:27 19 customers who made deposits, versus the \$150.00 associated  
05:24:32 20 with the reference group. And this is basically Exhibit  
05:24:35 21 PX-417.

05:24:36 22 Q. And then there's a bullet point down at the bottom.  
05:24:39 23 Can you read that for the jury?

05:24:40 24 A. Yes. The bullet point at the left says: Mobile  
05:24:44 25 deposit customers are one-and-a-half times more likely to

05:24:47 1 generate an annual profit of \$2,000.00 and have higher  
05:24:51 2 deposit balances.

05:24:52 3 Q. And if the jury wants to look at that, that can be  
05:24:55 4 found in Plaintiff's Exhibit No. 329; is that right?

05:24:58 5 A. I believe so.

05:24:59 6 Q. So did you see any other evidence on deposit profits?

05:25:05 7 MR. BUNT: If we can go to the next slide.

05:25:08 8 A. This slide is November 2010, and the interest -- it's  
05:25:16 9 another Wells Fargo planning document in connection with  
05:25:21 10 MRDC. You can see that in the -- in the text of the  
05:25:24 11 document.

05:25:24 12 And what's highlighted on the right is that MRDC  
05:25:30 13 provides Wells Fargo with the benefit of 20 percent of new  
05:25:36 14 deposits that come to Wells Fargo just by virtue of the  
05:25:39 15 fact that it's offering this MRDC app, this option.

05:25:43 16 Q. And is that PX-1069, for the jury's benefit?

05:25:48 17 A. Yes, sir, it is.

05:25:49 18 Q. And why is that -- that information important?

05:25:52 19 A. Well, Wells Fargo, like -- like -- like all banks,  
05:25:56 20 makes money on deposits. That's -- that's one of the  
05:25:59 21 businesses that they're in. And so if they're going to get  
05:26:02 22 20 percent new deposits, that's a -- that's a big plus.

05:26:05 23 Q. Now, you've discussed cost-savings benefits and  
05:26:07 24 increased profits benefits. Did you also investigate  
05:26:11 25 ecosystem benefits?

05:26:12 1 A. I did. That was the third bullet. Ecosystem benefits  
05:26:17 2 are the benefits to the bank, to Wells Fargo, by virtue of  
05:26:21 3 having the ability to offer this functionality to its  
05:26:25 4 customers.

05:26:25 5 Q. And what evidence have you seen regarding the ecosystem  
05:26:29 6 benefits to Wells Fargo?

05:26:31 7 A. The -- the next slide, which is another Wells Fargo  
05:26:37 8 planning document, this one done in 2011 with respect to  
05:26:45 9 mobile remote deposit capture. Talks about a primary  
05:26:46 10 benefit to Wells Fargo, being brand positioning and  
05:26:50 11 reputation. Customers expect their financial institution  
05:26:54 12 to provide this functionality.

05:26:56 13 And the other -- the other part that's -- that's  
05:26:59 14 highlighted on this document is that customers listed  
05:27:04 15 remote deposit as the number one pain point issue out of a  
05:27:10 16 hundred. So it was really important. This functionality  
05:27:13 17 was really important to customers. And Wells Fargo is --  
05:27:16 18 is aware back in 2011 of this importance.

05:27:20 19 MR. BUNT: And, for the record, that's PX-14.

05:27:23 20 Q. (By Mr. Bunt) Did Wells Fargo also do internal studies  
05:27:27 21 regarding the importance of MRDC with respect to customer  
05:27:33 22 attention?

05:27:34 23 A. Yes, sir. This is another Wells Fargo study. I  
05:27:36 24 believe it was around 2012. And it says that, on the  
05:27:40 25 right, the highlighted portion: MRDC customers are nearly

05:27:45 1 two times less likely to basically leave the bank. It says  
05:27:54 2 attrite. It means leave the bank.

05:27:56 3 Q. And is that PX-417?

05:27:58 4 A. Yes, sir.

05:27:59 5 Q. Did you find anything that would allow you to calculate  
05:28:06 6 the ecosystem benefit provided by the accused MRDC app?

05:28:10 7 A. Yes, I did. I mentioned before that one of the things  
05:28:13 8 economists do is they use benchmarks sometimes as a basis  
05:28:18 9 for determining the value of goods or services or products.

05:28:22 10 And in this case, I feel like I had a good  
05:28:28 11 benchmark for measuring the value of -- of the ecosystem  
05:28:32 12 benefit to Wells Fargo, and that benchmark is -- is a  
05:28:35 13 functionality called Zelle, Z-e-l-l-e.

05:28:37 14 Q. And what is Zelle?

05:28:39 15 A. Zelle is -- is a -- a way of -- of sending money  
05:28:45 16 electronically instantly from one person to another.

05:28:48 17 Q. And why did you think that this was a good benchmark?

05:28:51 18 MR. BUNT: If we could go to the next slide.

05:28:53 19 A. There -- there were really four reasons why I thought  
05:28:59 20 that Zelle was a -- was a useful benchmark here.

05:29:03 21 First, it's -- it's recognized as being table  
05:29:05 22 stakes, just as auto capture is in the -- in the financial  
05:29:09 23 community.

05:29:10 24 It's free to consumers. So when -- when a  
05:29:14 25 consumer uses Zelle to transfer money from one account to

05:29:17 1 somebody somewhere else, the consumer doesn't pay. The  
05:29:22 2 banks pay, however.

05:29:25 3 And, finally, Zelle is recognized as providing  
05:29:29 4 ecosystem benefits. So it seemed like a good benchmark to  
05:29:34 5 use for measuring that kind of benefit with respect to auto  
05:29:37 6 capture.

05:29:37 7 Q. And are you aware of any testimony confirming your  
05:29:41 8 opinion that it's a good benchmark?

05:29:44 9 A. Yes. This is from Mr. Easley, an AVP at USAA, and he  
05:29:49 10 talks about Zelle as -- as providing a comparable benefit  
05:29:52 11 in reference to the ability to send money from one person  
05:29:56 12 to another. And describes that as an ecosystem benefit  
05:29:59 13 with respect to access to money.

05:30:03 14 Q. How much do banks pay for access to Zelle?

05:30:07 15 A. Well, it varies. There's trade press that suggests  
05:30:12 16 that they pay between 50 and 75 cents for every  
05:30:16 17 transaction, even though it's free to the consumer. And  
05:30:23 18 I've seen USAA documents that indicate that it pays as much  
05:30:27 19 as 60 cents per transaction.

05:30:29 20 Q. And who is this money paid to?

05:30:31 21 A. It's paid to the -- the entities that essentially have  
05:30:34 22 set up Zelle, and that's a consortium of banks. And one of  
05:30:39 23 the banks that receives those funds is actually Wells  
05:30:42 24 Fargo.

05:30:42 25 Q. Mr. Weinstein, do you have an opinion as to whether the

05:30:44 1 50- to 75-cent figures represent a conservative estimate of  
05:30:51 2 the ecosystem value of MRDC?

05:30:51 3 A. Yes. Actually I think -- I think 60 cents -- something  
05:30:54 4 in that range is conservative.

05:30:56 5 MR. BUNT: Can we go to the next slide, please?

05:30:58 6 A. And it's conservative for a couple of reasons, at  
05:31:05 7 least. One is that, unlike auto capture, there are  
05:31:11 8 alternatives to Zelle -- that is to say, there are other  
05:31:14 9 ways of sending money from one person to another.

05:31:18 10 One that's pretty popular these days is Venmo.  
05:31:22 11 And you can send money from one person to another using  
05:31:26 12 Venmo. Whereas I'm not aware of any alternative to auto  
05:31:30 13 capture.

05:31:30 14 And, second, as -- as we've just seen, there are  
05:31:33 15 cost savings to the banks associated with mobile deposits  
05:31:36 16 and auto capture.

05:31:38 17 Zelle doesn't provide a cost savings, and so in  
05:31:40 18 that sense, auto capture is providing additional benefits  
05:31:44 19 that aren't present with Zelle, which means 60 cents could  
05:31:47 20 be too low.

05:31:48 21 MR. BUNT: Your Honor, may we approach the bench  
05:31:50 22 for just a moment?

05:31:51 23 THE COURT: You may. Approach the bench, counsel.  
05:31:53 24 (Bench conference.)

05:32:03 25 MR. BUNT: Your Honor, it looks like some of the



05:32:05 1 jurors are falling asleep, which I understand completely  
05:32:08 2 given this type of stuff. Do you want to let them stretch  
05:32:12 3 their legs for a minute or just keep trucking along?

05:32:15 4 THE COURT: How much more have you got on your  
05:32:17 5 direct?

05:32:17 6 MR. BUNT: I've got like six more pages, so -- out  
05:32:19 7 of 17. So I've got probably 15, 20 minutes.

05:32:22 8 THE COURT: I haven't seen anybody that looks like  
05:32:24 9 they're going to sleep. We'll pause, and I'll let  
05:32:27 10 everybody on the jury stand up for a few minutes, and then  
05:32:30 11 we'll sit back down.

05:32:30 12 MR. BUNT: Thank you.

05:32:30 13 MR. MELSHEIMER: We're fine with the sleeping,  
05:32:30 14 Your Honor.

05:32:30 15 THE COURT: Pardon?

05:32:31 16 MR. MELSHEIMER: We have no objection to the  
05:32:32 17 sleeping, Your Honor.

05:32:34 18 THE COURT: Except when you're at the podium. I  
05:32:37 19 understand.

05:32:37 20 (Bench conference concluded.)

05:32:44 21 THE COURT: Ladies and gentlemen, I'm not going to  
05:32:45 22 recess, but we're all going to take 30 seconds and stand up  
05:32:49 23 for a minute and stretch your legs, and then we're going to  
05:32:53 24 sit back down. So everybody all rise.

05:33:13 25 All right. Be seated.

05:33:17 1 Counsel, let's continue.

05:33:18 2 MR. BUNT: Thank you, Your Honor.

05:33:20 3 Q. (By Mr. Bunt) Mr. Weinstein, you've been talking about  
05:33:22 4 Factors 9 and 10 of the Georgia-Pacific factors. What's  
05:33:25 5 the next Georgia-Pacific factor you considered?

05:33:28 6 A. The next -- the next one I thought was relevant here is  
05:33:33 7 Georgia-Pacific Factor 5, which relates to the commercial  
05:33:37 8 relationship between the entities. And in this case,  
05:33:41 9 Wells Fargo and USAA.

05:33:43 10 And the significance of -- of Georgia-Pacific  
05:33:47 11 Factor 5 is this. If the entities that are negotiating for  
05:33:52 12 a license compete with one another, then the licensor is  
05:33:56 13 going to want more than if they don't compete. And the  
05:34:00 14 reason is that by providing that license, providing  
05:34:05 15 permission to use the technology, it's essentially  
05:34:07 16 impacting its own business.

05:34:09 17 It's giving that technology to the competitor.  
05:34:12 18 It's not giving it away for free because it's going to get  
05:34:18 19 paid. But, generally, you don't like giving commercial  
05:34:21 20 advantages that you believe you have to your competitor.

05:34:23 21 And so Georgia-Pacific 5 recognizes that fact.  
05:34:29 22 And so it says that in these kind of hypothetical  
05:34:33 23 negotiations, that's something that the parties are going  
05:34:36 24 to be aware of.

05:34:37 25 Q. Have you seen any evidence that USAA and Wells Fargo

05:34:40 1 compete directly with one another?

05:34:43 2 A. Yes, sir, I have.

05:34:45 3 MR. BUNT: Can we go to the next slide, please,  
05:34:49 4 sir, Mr. Huynh?

05:34:49 5 A. This next slide is -- is a Wells Fargo ad, and it's  
05:34:53 6 obviously targeting military service. And that's sort of a  
05:35:01 7 core constituency of USAA. And so you don't really need  
05:35:08 8 much more than to say -- to recognize the fact that not  
05:35:12 9 only are they banks, but Wells Fargo is targeting the  
05:35:15 10 military for its customer base. So they're -- they're  
05:35:17 11 direct competitors.

05:35:18 12 Q. And this is PX-1083?

05:35:20 13 A. Yes, sir.

05:35:21 14 Q. And have you considered the possibility that maybe  
05:35:24 15 Wells Fargo might not need to use the USAA patents-in-suit?

05:35:27 16 A. Yes, sir, I have.

05:35:29 17 Q. And what did you conclude?

05:35:31 18 A. Well, I concluded that they thought about trying to  
05:35:34 19 find a way to avoid having to take a license from USAA, but  
05:35:39 20 instead, doing it themselves perhaps.

05:35:45 21 MR. BUNT: Can we have the next slide? Yes,  
05:35:48 22 thanks.

05:35:48 23 A. So this is another Wells Fargo planning document, dated  
05:35:52 24 2011, in which it's considering ways of developing its own  
05:36:01 25 auto capture functionality. And, among other things, the

05:36:05 1 document references how long it would take, 9 to 18 months,  
05:36:09 2 and the fact that even after spending that time, the  
05:36:12 3 technology they get might not be what they really needed.

05:36:15 4 And so what -- what this relates to is -- is -- is  
05:36:21 5 the fact that if there's an alternative to taking a  
05:36:26 6 license, the ability to use that alternative will limit how  
05:36:31 7 much one would pay for that license, and here, what we see  
05:36:34 8 is Wells Fargo considering that possibility, but not -- not  
05:36:40 9 finding that to be a useful path to go down.

05:36:43 10 Q. (By Mr. Bunt) Did you have any information from  
05:36:46 11 Mr. Calman about whether there were any commercially viable  
05:36:48 12 alternatives to the patents-in-suit?

05:36:50 13 A. Yes, sir, I did.

05:36:52 14 Q. What did he say?

05:36:54 15 A. Well, this is not --

05:36:55 16 MR. BUNT: Let's go back to the previous slide, if  
05:36:57 17 we could.

05:36:58 18 A. Yeah, the Calman -- what Mr. Calman said is he was not  
05:37:00 19 aware of any commercially viable non-infringing  
05:37:04 20 alternatives.

05:37:05 21 Q. (By Mr. Bunt) And just for the jury's record, this is  
05:37:07 22 PX-14, the document you were just showing the jury about  
05:37:12 23 the unavailability of an internal RDC capability at Wells  
05:37:19 24 Fargo?

05:37:19 25 MR. BUNT: Now, let's go to the next slide,

05:37:21 1 please, sir.

05:37:22 2 Q. (By Mr. Bunt) What other evidence did you see that  
05:37:24 3 there were no viable non-infringing alternatives to the  
05:37:26 4 patents-in-suit?

05:37:26 5 A. Well, apart from -- from what I just testified to about  
05:37:30 6 Mr. Calman, there also was sworn testimony by Mr. Jitodai  
05:37:34 7 at Wells Fargo who was their corporate representative; in  
05:37:38 8 other words, he spoke and speaks for the company.

05:37:40 9 And he was asked about whether manual capture  
05:37:46 10 option would -- would be a possible alternative, in the  
05:37:51 11 sense that it would be sufficiently reliable. And he  
05:37:54 12 really couldn't say anything about the success rate  
05:37:56 13 associated with -- with that option.

05:37:59 14 MR. BUNT: Let's go to the next slide.

05:38:01 15 Q. (By Mr. Bunt) Can you briefly summarize the benefits  
05:38:03 16 that you quantified?

05:38:04 17 A. Yes. So I talked about the three general types of --  
05:38:11 18 of benefits associated with Wells Fargo's use of the  
05:38:18 19 patents-in-suit. And I did -- I did that because that's  
05:38:22 20 what the statute says I should do, look at the benefits to  
05:38:27 21 the infringer.

05:38:27 22 And I went ahead and quantified those benefits.  
05:38:33 23 The cost-savings benefits are approximately \$476 million;  
05:38:37 24 the increased profits, \$316 million; the ecosystem  
05:38:45 25 benefits, \$139 million, for a total of \$932 million for the

05:38:50 1 damage period December 15th, 2016, to November 4th, roughly  
05:38:55 2 the trial date right now, 2019. And these are benefits  
05:38:58 3 associated with auto capture-enabled MRDC.

05:39:05 4 MR. BUNT: So let's go to the next slide.

05:39:07 5 Q. (By Mr. Bunt) And can you explain how you quantified  
05:39:09 6 these specific benefits?

05:39:11 7 A. Right. So now we're going to go back and see where  
05:39:14 8 those numbers came from. And we start with the  
05:39:16 9 cost-savings benefits.

05:39:18 10 And with respect to the cost-savings benefits,  
05:39:19 11 we're talking about what's called channel optimization,  
05:39:23 12 which has to do with the fact that it costs Wells Fargo  
05:39:26 13 less money to process a mobile deposit than it does to  
05:39:30 14 process a deposit made at an ATM or in the bank.

05:39:34 15 And what this slide depicts is information that  
05:39:39 16 was provided by Wells Fargo on its actual costs associated  
05:39:44 17 with processing deposits at each of the three channels that  
05:39:49 18 are shown here.

05:39:52 19 And what I did is I looked at those costs,  
05:39:55 20 tabulated them, and then calculated the cost savings  
05:39:58 21 associated with mobile deposits relative to each of those  
05:40:03 22 channels. And the cost savings are shown at Lines 4 and 4.  
05:40:09 23 You can calculate them right from -- right from this  
05:40:11 24 demonstrative.

05:40:12 25 Q. So, for example, if we go up to the 2018 column that

05:40:16 1 says Teller Check Only Deposit, that's -- what is that  
05:40:21 2 telling the jury?

05:40:22 3 A. That's what it cost Wells Fargo to process a check  
05:40:26 4 that's deposited at the bank.

05:40:28 5 Q. And then --

05:40:29 6 A. \$2.75.

05:40:30 7 Q. -- and then the second line under 2018, what is that  
05:40:36 8 cost?

05:40:36 9 A. That's the \$1.58 associated with processing an ATM  
05:40:42 10 deposit.

05:40:42 11 Q. And then this third one, what does that show?

05:40:44 12 A. That's approximately 36 cents for a mobile deposit.

05:40:48 13 Q. So the -- the cost savings you see here on Line 4,  
05:40:51 14 that's the difference -- if you could just explain one more  
05:40:57 15 time the difference between teller check and mobile  
05:41:01 16 deposit. Is that correct?

05:41:01 17 A. Right. Line -- Line 4 is -- is basically Line 1 minus  
05:41:06 18 Line 3, teller minus mobile deposit, that's correct.

05:41:07 19 Q. And then did you do that for each year of data that you  
05:41:10 20 had from Wells Fargo?

05:41:11 21 A. I did. I did it for -- for -- for each year. And  
05:41:18 22 Wells Fargo provided information on the frequency of teller  
05:41:21 23 deposits versus ATM documents. So I took the information  
05:41:25 24 that Wells Fargo provided and -- and made these kinds of  
05:41:30 25 calculations.

05:41:30 1 Q. And how did you use this information to come up with  
05:41:34 2 total channel optimization cost savings?

05:41:38 3 A. I did the math, took all that information, and when you  
05:41:44 4 did this kind of calculation for the entire damage period,  
05:41:49 5 the total damages associated with what's called channel  
05:41:52 6 optimization, namely the cost savings associated with  
05:41:56 7 mobile deposits, are \$302 million. That is the cost  
05:42:01 8 savings that Wells Fargo obtained by virtue of mobile  
05:42:06 9 deposits relative to ATMs and teller deposits.

05:42:12 10 Q. And this exhibit that we're looking at is Plaintiff's  
05:42:16 11 Exhibit 28; is that correct?

05:42:17 12 A. Yes, sir.

05:42:17 13 Q. Okay. So can you tell us about the other category of  
05:42:21 14 cost savings?

05:42:22 15 MR. BUNT: Let's go to the next slide. There we  
05:42:24 16 go.

05:42:24 17 A. So the second category that I mentioned was the fact  
05:42:27 18 that with all these mobile deposits, the bank needs future  
05:42:31 19 branches, and branches cost money to build.

05:42:36 20 So, again, I took -- I took information from Wells  
05:42:41 21 Fargo which allowed me to determine the volume of mobile  
05:42:44 22 deposits that would have been made with a teller after  
05:42:48 23 subtracting out those 20 percent new deposits because they  
05:42:52 24 get those anyway. And so they -- they shouldn't be  
05:42:54 25 included. And that came to approximately 25, 26 million



05:43:02 1 mobile deposits in the number -- the year is 2018 -- for  
05:43:08 2 that year.

05:43:12 3 Based on the number of checks a branch can process  
05:43:15 4 in a -- in a given year, that comes to an additional 184  
05:43:21 5 branches that are not needed by virtue of mobile deposits,  
05:43:26 6 as opposed to the need for branches.

05:43:30 7 And at a construction cost of approximately just a  
05:43:33 8 million -- a million five per branch, and that does not  
05:43:37 9 include the land or the people but just -- just includes  
05:43:41 10 the building and equipment, that is a savings from not  
05:43:45 11 having to have those branches of \$276 million to Wells  
05:43:50 12 Fargo.

05:43:50 13 MR. BUNT: So if we could go to the next slide.

05:43:53 14 Q. (By Mr. Bunt) So how did you calculate the capital  
05:43:55 15 cost savings for this period of damages that we're talking  
05:43:57 16 about, December 15th of 2016 up until trial?

05:44:01 17 A. Right. So the figures on the last slide amount to  
05:44:07 18 75 cents per deposit in savings, and I multiplied that  
05:44:12 19 times the number of mobile deposits during the damage  
05:44:15 20 period so that the capital cost savings to Wells Fargo is  
05:44:20 21 approximately \$174 million. That's just from not having to  
05:44:24 22 build all these extra branches.

05:44:26 23 Q. And so the second line, the total number of mobile  
05:44:29 24 deposits from December 15th, 2016, until now, that's how  
05:44:34 25 many?

05:44:34 1 A. 232 million.

05:44:38 2 Q. Okay. So could you describe to the jury how you  
05:44:41 3 calculated total cost-savings benefits to Wells Fargo?

05:44:45 4 A. So the total cost savings were the \$302 million  
05:44:50 5 associated with the fact that it costs less for Wells Fargo  
05:44:55 6 to process a mobile deposit than an ATM or a teller  
05:45:01 7 deposit, plus the capital cost savings of \$174 million  
05:45:06 8 associated with the fact that they don't need those extra  
05:45:08 9 branches, producing a total cost savings of approximately  
05:45:11 10 \$476 million.

05:45:16 11 Q. And then the third category -- or the second category  
05:45:19 12 of benefits that you were looking at was increased profits;  
05:45:23 13 is that correct?

05:45:23 14 A. Yes, sir.

05:45:26 15 MR. BUNT: And so let's go to the next slide.

05:45:30 16 Q. (By Mr. Bunt) How much here?

05:45:31 17 A. Once again, for the damages period, the increased  
05:45:35 18 profits made from mobile deposits are approximately \$316  
05:45:45 19 million.

05:45:45 20 Q. And can you walk the jury how you came up with these  
05:45:48 21 increased profits?

05:45:50 22 MR. BUNT: Can you go to the next slide?

05:45:51 23 A. So Wells Fargo provided information on average  
05:45:57 24 profitability that it obtains from checking accounts. That  
05:46:03 25 information was provided by year, including all years in

05:46:09 1 the damages period. So what I did is I took that  
05:46:14 2 information, and the year that's shown here is 2018. This  
05:46:18 3 is just one year. I took that information.

05:46:22 4 The average profit in that year, as provided by  
05:46:25 5 Wells Fargo per checking account, was about \$94.00. 14  
05:46:30 6 percent of deposits were mobile deposits. And so what I  
05:46:37 7 did is multiply that 14 percent times the \$94.00 average  
05:46:43 8 profit in order to get profit attributed to mobile  
05:46:47 9 deposits, \$13.29.

05:46:50 10 The last step of this calculation was to multiply  
05:46:54 11 that \$13.29 times the number of mobile deposit accounts  
05:46:59 12 that year, approximately 10.9 million, so that the profits  
05:47:04 13 from mobile deposits in 2018 are \$145 million to Wells  
05:47:12 14 Fargo.

05:47:12 15 And then I do the same step for the other years in  
05:47:15 16 the damage period, and total profits from mobile deposits  
05:47:18 17 using that same methodology are approximately \$316 million.  
05:47:24 18 Q. So let's turn to the last category of damages which are  
05:47:30 19 the ecosystem benefits. Can you explain to us how you  
05:47:33 20 calculated those?

05:47:34 21 A. Yes. This is an easier calculation to describe.  
05:47:41 22 Again, during the damage period, I used the same figures  
05:47:44 23 for mobile deposits, 232 million mobile deposits, and both  
05:47:51 24 I and Wells Fargo's damage expert, essentially, agree with  
05:47:56 25 those numbers. I took the east -- ecosystem benefit which

05:47:59 1 I believed to be 60 cents as a -- as a useful benchmark.

05:48:04 2 And when you do that 60-cent per deposit ecosystem  
05:48:11 3 benefit, namely to brand name and reputation and deal with  
05:48:14 4 the customers' pain points, the ecosystem benefits are  
05:48:17 5 approximately \$139 million.

05:48:21 6 Q. So are the USAA patents responsible for all of the  
05:48:27 7 benefits that you have just quantified?

05:48:30 8 A. No, sir.

05:48:32 9 Q. So how did you go about figuring out what was  
05:48:36 10 attributable to the United -- to the USAA patents?

05:48:39 11 A. Right. As I said earlier, I start with the benefits  
05:48:44 12 associated with MRDC, and that's what's shown on the  
05:48:49 13 left-hand side of this slide. And those are the figures  
05:48:52 14 that I've been describing.

05:48:53 15 And then what I do is I apportion down to the  
05:48:56 16 contribution of USAA's two patents-in-suit. And based on  
05:49:03 17 Mr. -- Mr. Calman's research, which we just heard about,  
05:49:07 18 that apportionment rate conservatively, according to him,  
05:49:12 19 is -- is 40 percent.

05:49:13 20 And so what I do is I take the MRDC patents from  
05:49:19 21 auto-enabled MRDC benefits to Wells Fargo, and I multiply  
05:49:25 22 that -- those benefits times the apportionment factor of  
05:49:30 23 40 percent. And so the benefits then that are attributable  
05:49:35 24 to the patent-in-suit are shown on the right-hand side  
05:49:39 25 of -- of this demonstrative, and they -- they amount to

05:49:44 1 \$373 million, which you saw right at the beginning of my  
05:49:48 2 testimony. And those are the benefits that reflect the  
05:49:51 3 contribution of the patents-in-suit to all of the benefits  
05:49:57 4 associated with MRDC at Wells Fargo during the damage  
05:50:02 5 period.

05:50:02 6 Q. And are you aware of any evidence that supports  
05:50:05 7 Mr. Calman's 40 percent apportionment factor?

05:50:11 8 A. Yes.

05:50:11 9 Q. And why do you use that as a figure, and do you believe  
05:50:14 10 that to be a conservative estimate?

05:50:16 11 MR. BUNT: Let's go to the next slide.

05:50:19 12 A. I -- I do. It's a conservative estimate for at least  
05:50:23 13 the reasons that are summarized on this slide. We saw  
05:50:26 14 Mr. Saffici's testimony that auto capture is acknowledged  
05:50:30 15 as the foundation for mobile check deposit successful;  
05:50:38 16 Mr. Ajami's testimony that auto capture must be treated as  
05:50:41 17 must-have feature; and that Futurion Report that basically  
05:50:44 18 says if -- if mobile deposit doesn't work right, customers  
05:50:50 19 are going to look for another bank.

05:50:52 20 Q. (By Mr. Bunt) So now that you've determined that 40  
05:50:55 21 percent of the quantifiable benefits of the accused MRDC  
05:50:59 22 system are attributable to the patents-in-suit, how did you  
05:51:02 23 arrive at your final damages figure?

05:51:05 24 A. Well, there's one more step. Once you get to the point  
05:51:09 25 that the patents-in-suit account for approximately \$373

05:51:14 1 million in benefits to Wells Fargo, the final step involves  
05:51:24 2 determining how that bundle of benefits is going to be  
05:51:28 3 split at the hypothetical negotiation that we started with  
05:51:31 4 between Wells Fargo and USAA. And understand, as I said at  
05:51:34 5 the beginning, at the hypothetical negotiation, one of the  
05:51:37 6 things that the parties know is about the benefits that are  
05:51:41 7 going to reflect use of the functionality by the infringing  
05:51:47 8 entity.

05:51:48 9 And so they're aware of these \$373 million in  
05:51:53 10 benefits, and now the final step here is, well, where do  
05:51:57 11 they wind up at the end of this hypothetical negotiation?  
05:52:00 12 That's the last step.

05:52:02 13 MR. BUNT: Mr. Huynh, can we have the next slide?  
05:52:05 14 A. Well, this final slide -- well, semifinal slide --  
05:52:08 15 reflects my conclusion as to the output -- as to the  
05:52:13 16 outcome of the hypothetical negotiation, only those  
05:52:16 17 benefits.

05:52:16 18 The pie represents the \$373 million in benefits,  
05:52:20 19 and I've concluded that Wells Fargo would negotiate for its  
05:52:26 20 return on equity, that is, the amount of money it makes on  
05:52:30 21 the equity that it has at about the time of the  
05:52:34 22 hypothetical negotiation, and that's approximately \$73  
05:52:39 23 million. That way it's getting the same benefit from these  
05:52:43 24 patents as it gets on its other amount. All right.

05:52:46 25 Q. (By Mr. Bunt) How much would USAA receive of that \$373

05:52:50 1 million?

05:52:50 2 A. USAA gets the rest, roughly \$299 million, and that's  
05:52:55 3 the damage number that I've -- that I've ultimately  
05:52:57 4 concluded would be the outcome of the hypothetical  
05:53:01 5 negotiation.

05:53:01 6 Q. So your final determination on the damages adequate to  
05:53:05 7 compensate USAA for infringement of the patents-in-suit by  
05:53:10 8 Wells Fargo is \$299.8 million; is that correct?

05:53:13 9 A. Yes, sir.

05:53:14 10 Q. Thank you, sir.

05:53:15 11 MR. BUNT: I'll pass the witness.

05:53:18 12 THE COURT: Ladies and gentlemen, before the  
05:53:21 13 Defendant cross-examines the witness, we're going to recess  
05:53:23 14 for the evening.

05:53:24 15 We'll begin with the Defendant's cross-examination  
05:53:26 16 of this witness tomorrow.

05:53:28 17 I'm going to ask you to close your notebooks and  
05:53:32 18 leave them on the table in the jury room as you exit the  
05:53:34 19 courthouse.

05:53:36 20 I'll remind you to follow all the instructions  
05:53:38 21 that I've given you throughout the trial, including, of  
05:53:41 22 course, as you would expect me to remind you, not to  
05:53:43 23 discuss the case with anyone.

05:53:45 24 If you will attempt to be back tomorrow morning,  
05:53:48 25 just as you did today -- we did not start quite at 8:30.

05:53:51 1 That's on our side of the fault, not yours, but we will try  
05:53:54 2 to do better tomorrow. And if you'll get here in time so  
05:53:58 3 that you can be assembled and ready to go by 8:30, I would  
05:54:00 4 appreciate it.

05:54:01 5 Have a good evening, ladies and gentlemen. The  
05:54:03 6 jury is excused for the evening at this time.

05:54:05 7 COURT SECURITY OFFICER: All rise.

05:54:06 8 (Jury out.)

05:54:27 9 THE COURT: Are either Plaintiff or Defendant  
05:54:29 10 aware of anything that should be taken up before we recess  
05:54:31 11 for the evening?

05:54:33 12 MR. SHEASBY: Nothing from Plaintiffs, Your Honor.

05:54:34 13 MR. BUNT: Yes, yes, there is something from the  
05:54:36 14 Plaintiffs.

05:54:37 15 MR. SHEASBY: Something for Plaintiffs, Your  
05:54:40 16 Honor.

05:54:40 17 THE COURT: You may step down, Mr. Weinstein.

05:54:43 18 THE WITNESS: Thank you, sir.

05:54:44 19 MR. BUNT: I know Your Honor instructed us to have  
05:54:47 20 jury instructions to you by noon tomorrow, and I was hoping  
05:54:51 21 to beg for the indulgence of the Court on behalf of  
05:54:54 22 everybody here. Would it be possible for us to have those  
05:54:57 23 to you, say, by noon on Saturday instead? The reason being  
05:55:02 24 that I think we're going to have a lot more opportunity to  
05:55:04 25 make headway tomorrow afternoon while the Court is at the



05:55:08 1 investiture proceeding, and I think we could get a more  
05:55:12 2 polished product to you by Saturday.

05:55:14 3 THE COURT: I gather the Defendant joins in that?

05:55:18 4 MR. HILL: Yes, Your Honor.

05:55:19 5 MR. BUNT: They threw me under the bus and told  
05:55:22 6 me --

05:55:22 7 MR. MELSHEIMER: We join enthusiastically,  
05:55:26 8 Your Honor.

05:55:26 9 MR. SHEASBY: I objected, Your Honor.

05:55:27 10 THE COURT: Well, I'll move it from noon on Friday  
05:55:30 11 to 5:00 p.m. on Friday, and I'll also instruct that, in  
05:55:34 12 addition to filing a PDF with the clerk's office, you're to  
05:55:38 13 email a Word version to my staff so that we'll have it in  
05:55:42 14 Word form.

05:55:43 15 Is there anything else to take up before we  
05:55:45 16 recess?

05:55:46 17 MR. SHEASBY: Nothing from Plaintiffs, Your Honor.

05:55:48 18 MR. MELSHEIMER: Nothing -- nothing, Your Honor.  
05:55:50 19 Thank you.

05:55:50 20 THE COURT: All right. We will read exhibits into  
05:55:52 21 the record before I bring in the jury in the morning.

05:55:56 22 The Court stands in recess until tomorrow.

05:56:00 23 COURT SECURITY OFFICER: All rise.

05:56:01 24 MR. SHEASBY: Thank you, Your Honor.

25 (Recess.)

## 1 CERTIFICATION

2  
3 I HEREBY CERTIFY that the foregoing is a true and  
4 correct transcript from the stenographic notes of the  
5 proceedings in the above-entitled matter to the best of my  
6 ability.

7  
8  
9 /S/ Shelly Holmes  
10 SHELLY HOLMES, CSR, TCRR  
11 OFFICIAL REPORTER  
State of Texas No.: 7804  
Expiration Date: 12/31/20

10/31/19  
Date